DOCUMENT RESUME

ED 099 910 CS 500 904

AUTHOR	Tinkham, Spencer F.
TITLE	The A.A.A.A. [American Association of Advertising Agencies] Educational Foundation Grants: Purpose, Results, Application; On the 22 Research Grants Awarded by the Foundation from 1968 through 1973, with Bibliographies of Published Material Which Resulted from the Research.
INSTITUTION	American Association of Advertising Agencies Educational Foundation, New York, N.Y.
PUB DATE	73
NOTE	103p.
AVAILABLE FROM	American Association of Advertising Agencies Educational Foundation, Inc., 200 Park Avenue, New York, N. Y. 10017 (Free)
EDRS PRICE	MF-$0.75 HC Not Available from EDRS. PLUS POSTAGE
DESCRIPTORS	Bibliographies; Communication (Thought Transfer); *Consumer Economics; Educational Research; *Grants; Higher Education; Mass Media; *Publicize; *Research Projects; Research Reviews (Publications); *School Industry Relationship

ABSTRACT

The Educational Foundation of the American Association of Advertising Agencies was established by the Association's board to foster the accomplishment of six major goals: to create a bridge between advertising and university research, to attract top young people to the study of advertising, to raise the academic stature of advertising, to enlarge the body of knowledge about advertising and the consumer, to document the advertising industry's positions with government, and to work toward establishing chairs of advertising at graduate business schools. Chartered in 1967, the Educational Foundation has achieved considerable success in achieving the first five goals by the funding of a research program in the areas of marketing, advertising, and consumer behavior. This document is a digest of each of the 22 grants awarded by the Foundation between 1968 and 1973. It supplies a bibliography of the books, monographs, articles, dissertations, and working papers which resulted from each grant. Significant contributions were made and are continuing to be made to our knowledge about the economics of advertising, consumer decision processes, market segmentation, and how advertising is perceived. Many of the grants are still ongoing projects which promise additional significant findings. (TO)

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"to enlarge our body of knowledge about advertising, marketing communications and consumer behavior..."

the A.A.A.A. Educational Foundation Grants: Purpose
Results
Application

A Report by

Spencer F. Tinkham
Assistant Professor
Graduate School of Business
Columbia University, New York

... on the 22 Research Grants Awarded by the Foundation from 1968 through 1973, with Bibliographies of Published Material which Resulted from the Research ....

CS 500 904

The A.A.A.A. Educational Foundation, inc.
200 Park Avenue, New York, N. Y. 10017—682-2500

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THE A.A.A.A. EDUCATIONAL FOUNDATION GRANT PROGRAM FOR RESEARCH IN ADVERTISING COMMUNICATIONS

A Report By

SPENCER F. TINKHAM
Assistant Professor
Graduate School of Business
Columbia University, New York

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PREFACE

The Educational Foundation of the American Association of Advertising Agencies was established by the Association's board in order to foster the accomplishment of six major goals: (1) To create a bridge between advertising and university research, (2) To attract top young people to the study of advertising, (3) To raise the academic stature of advertising, (4) To enlarge the body of knowledge about advertising and the consumer, (5) To document the advertising industry's positions with government, and (6) To work toward establishing chairs of advertising at graduate business schools. Chartered in 1967, the Educational Foundation has achieved considerable success in accomplishing five of the six goals. Only the sixth goal to establish chairs of advertising has not been realized. The cost of a chair exceeds $800,000, while the donor has little to say about choosing an occupant or selecting criteria for that occupant. Thus, this goal involved substantial risk with no assurance of return benefit.

The other five purposes were served by the funding of a research program in areas of marketing, advertising, and consumer behavior. The Foundation awarded research grants to 36 academic specialists at 22 graduate schools. Grantees were selected from a group of more than 150 applicants, and they number among the best academic researchers in their respective fields in the United States. This program has certainly helped to create a bridge between advertising and university research. The research program has also served to attract top young people to the study of advertising. Many masters degree students and 64 doctoral candidates have benefited from research assistantships funded by the Foundation. Because most of the doctoral students are now teaching at recognized universities both here and abroad, and are stimulating interest in advertising research among other young scholars, the research funds awarded by the Foundation are continuing to improve the quality of advertising researchers.

With the above considerations in mind, it is not surprising that the research grant program has been acclaimed by academic leaders as an unparalleled contribution to pure academic research in advertising. Awarded with a minimum of restrictions, the grants have generated a large number of scholarly papers, books, and monographs. Not only have they stimulated interest in additional research, but the Foundation grants have also served as "seed money" for the funding of extensive research programs in advertising. Another measure of the increasing academic stature of advertising was the 1969 Berkeley Symposium on the "Social Role of Advertising," which attracted distinguished academic thinkers and agency leaders, which defined the issues relating to advertising's social effects, and which resulted in the first chapter of a new book by John G. Myers, entitled Social Issues in Advertising.

Because the grant program has raised the academic stature of advertising and directly enlarged our body of knowledge about advertising and the consumer, it has helped to document the advertising industry's position with the government. This objective body of knowledge helped in establishing grantees as impartial and credible sources of information for Federal regulatory agencies. Six grantees were invited by the Federal Trade Commission to serve as public witnesses during the 1971 hearings, and one grantee served as consultant to the

FTC during the hearings. Still another grantee prepared the official FTC report on the 1971 hearings. By objectively exploring areas of interest replete with unsupported social criticism, grantees have performed a useful service for the makers of public policy and the public.

This abstract summarizes and evaluates the contributions made by the Foundation to knowledge about advertising and the consumer. It consists of a digest of each of the 22 grants and supplies a bibliography of the books, monographs, articles, dissertations, and working papers which resulted from each. Significant contributions were made, and are continuing to be made, to our knowledge about the economics of advertising, consumer decision processes, market segmentation, and how advertising is perceived. Significant contributions are also being made to our knowledge about basic research methodology. Such knowledge is widely applicable in a variety of contexts. The quality of the research stemming from the 22 grants is uniformly excellent, but highly technical. This digest will attempt to analyze and evaluate each research grant in terms of its contribution to our knowledge of advertising and its effects on the consumer. Each discussion is necessarily an oversimplification of the theoretical bases for the grant, its research methodology, and results. As suggested above, many grants are still ongoing projects which promise additional significant findings. Because it is quite likely that many readers will be interested in obtaining additional information concerning the research efforts outlined here, the bibliographical materials can be used as a guide for further study.

The Educational Foundation has awarded a total of $421,423.50 in its research grant program. To qualify for a grant, a professor had to have one or more doctoral students. Grantees were selected by an Academic Advisory Committee, appointed by A.A.A.A. and comprised of five distinguished academicians from the fields of economics, liberal arts, advertising education, and graduate business education. The grant was allocated to the school, but disbursed at the discretion of the grantee. Grants were awarded in varying amounts up to $10,000 per year, and a renewal for a second year or beyond could be requested. Progress reports were required near the end of the first year, and work accomplished was judged in terms of how closely it related to the original proposal. Grants could not cover personal compensation of the grantee or school overhead, and not more than 40% of a grant could be used to compensate faculty members not candidates for degrees.

Grants were awarded on the basis of seven criteria: (1) Validity and realism of approach to proposed research; (2) Background and accomplishments of professor and colleagues on project; (3) Freshness and originality of concept and methods; (4) Potential contributions to understanding of advertising, marketing, communication, or consumer behavior; (5) "Multiplier" capacity: Will the proposal lead to more doctoral research, published materials, and further study in the field?; (6) Relation to a total research program vs. special individual project; and (7) Extent to which supplementary funds were provided by the school or other sources.

A list of A.A.A.A. Grants awarded for the support of research programs in advertising, marketing, communication, or consumer behavior follows. Please note that the academic titles of grantees and their place of employment refer to the time when the grants were originally awarded, and do not necessarily reflect present location or title.

THE A.A.A.A. GRANTS AWARDED
1968 - 1973
for the support of Research Programs in Advertising, Marketing, Communication, or Consumer Behavior

UNIVERSITY OF CALIFORNIA (Berkeley)
School of Business Administration

Francesco M. Nicosia, Chairman, Marketing and International Business

working with Robert Ferber, Research Professor of Economics,
Bureau of Economic and Business Research,
University of Illinois

Two year grant awarded in 1968; continued for one year in 1970

Area of Research: Formulation of Models of Consumer Behavior Relating to Branded Products, Utilizing Long-Term Consumer Panel Data

UNIVERSITY OF CHICAGO
Graduate School of Business Administration

Lester G. Telser, Professor of Economics, Department of Economics

Two year grant awarded in 1968; continued for one year in 1970

Area of Research: Economics of Advertising

UNIVERSITY OF CINCINNATI
College of Business Administration

Jerome B. Kernan, Professor of Behavioral Analysis

Two year grant awarded in 1970

Area of Research: Development of a Consumer Information-Handling Paradigm of Three Principal Components: Acquisition; Processing; and Utilization

COLUMBIA UNIVERSITY
Graduate School of Business

John A. Howard, Professor of Marketing

John U. Farley, Associate Professor of Marketing

One year grant awarded in 1969; completion in 1970

Area of Research: Relation Between Advertising and Buyer Behavior

The A.A.A.A. Grants Awarded (Continued)

CORNELL UNIVERSITY
Graduate School of Business and Public Administration

G. David Hughes, Associate Professor of Marketing

Two year grant awarded in 1968; completion in 1970

Area of Research: Building Predictive Models of Effects of Marketing Communications on Purchase Behavior

FLORIDA STATE UNIVERSITY
School of Business

Emma Auer, Associate Professor of Advertising and Public Relations

Two year grant awarded in 1969

Area of Research: Determination of the Comparative Empathic Skills of Advertising Communicators to Those of the Population in General

HARVARD UNIVERSITY
Graduate School of Business Administration

Stephen A. Greyser, Associate Professor and
Marketing Area Advisor - Doctoral Program

Two year grant awarded in 1969

Area of Research: Marketing Communications Related to Consumer Behavior, the Communications Process, and Advertising

UNIVERSITY OF ILLINOIS
College of Communications

S. Watson Dunn, Head, Department of Advertising

Two year grant awarded in 1968; continued for two years in 1970

Area of Research: Selected Aspects of Advertising Relating to International Communications, Consumer Behavior and Marketing Management

INDIANA UNIVERSITY
Graduate School of Business

Leonard J. Parsons, Assistant Professor of Marketing

One year grant awarded in 1969; completion in 1970

Area of Research: Relationships Between Advertising, Attitudes, and Purchase Behavior

The A.A.A.A. Grants Awarded (Continued)

UNIVERSITY OF MICHIGAN
Graduate School of Business Administration

Joseph W. Newman, Professor of Business Administration, and Marketing Area Coordinator

Two year grant awarded in 1968; continued for one year in 1970

Area of Research: Consumer Purchase Decision Process

MICHIGAN STATE UNIVERSITY
College of Communication Arts

Bradley S. Greenberg, Associate Professor of Communication

Two year grant awarded in 1968; completion in 1970

Area of Research: Mass and Interpersonal Communication of Consumer Information and Goals Among the Urban Poor

UNIVERSITY OF MINNESOTA
Graduate School of Business Administration
Center for Experimental Studies in Business

Robert J. Holloway, Professor of Marketing
Richard N. Cardozo, Associate Professor of Marketing
Ivan Ross, Assistant Professor of Marketing

Two year grant awarded in 1968; continued for one year in 1970

Area of Research: Application of Cognitive Theory to Consumer Behavior and Marketing Communications; Decision-Making in Marketing Management Process

UNIVERSITY OF MISSOURI
School of Journalism

William Stephenson, Distinguished Research Professor in Advertising

Two year grant awarded in 1970

Area of Research: To Extend Work of School's Communication Research Unit in order to Foster Research and Course Work on the Subjective Approach to Advertising

NORTHWESTERN UNIVERSITY
Graduate School of Management

Philip Kotler, Professor of Marketing
Gerald Zaltman, Assistant Professor of Marketing

One year grant awarded in 1970

Area of Research: Research into Social Marketing

The A.A.A.A. Grants Awarded (Continued)

OHIO STATE UNIVERSITY
College of Administrative Science

Roger D. Blackwell, Associate Professor of Marketing

One year grant awarded in 1968; completed in 1969

Area of Research: Evaluation of Physiological Measures in Advertising Research

UNIVERSITY OF PENNSYLVANIA
Wharton School of Finance and Commerce

Paul E. Green, Professor of Marketing

One year grant awarded in 1969; renewed for one year in 1970

Area of Research: Application of Nonmetric Multidimensional Scaling Methods to Market Segmentation Problems

UNIVERSITY OF PITTSBURGH
Graduate School of Business

William R. King, Professor of Business Administration

One year grant awarded in 1970

Area of Research: Methodological Simulation in Marketing and Advertising

PURDUE UNIVERSITY
Herman C. Krannert Graduate School of Industrial Administration

Frank M. Bass, Professor of Industrial Administration

Two year grant awarded in 1968; completion in 1970

Area of Research: Consumer Choice Behavior

UNIVERSITY OF SOUTHERN CALIFORNIA
Graduate School of Business Administration

Taylor W. Meloan, Acting Dean; Professor and Chairman, Department of Marketing and Business Communications

Two year grant awarded in 1969

Area of Research: Minority Racial Group Perceptions of Advertising

The A.A.A.A. Grants Awarded (Continued)

STANFORD UNIVERSITY
Graduate School of Business

William F. Massy, Professor of Business Administration and Director of Research

Michael L. Ray, Assistant Professor of Marketing

Two year grant awarded in 1968; continued for one year in 1970; and another year in 1973.

Area of Research: A Quantitative-Behavioral Attack on the Problem of Repetition of Advertising

SYRACUSE UNIVERSITY
College of Business Administration

David L. Wilemon, Assistant Professor of Marketing, Marketing Management and Transportation Department

Eighteen months grant awarded in 1968; completion in 1970

Area of Research: Exploratory Study into Key Variables Surrounding The Condition of Risk in the Consumer's Decision-Making Set

UNIVERSITY OF WISCONSIN
School of Journalism

Ivan L. Preston, Associate Professor of Journalism, and Research Associate, Mass Communications Research Center

One year grant awarded in 1969; renewed for one year in 1970

Area of Research: Applicability of General Communication Models To The Perception of Advertisements

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PART I

ADVERTISING RESEARCH IN AN ACADEMIC ENVIRONMENT: IMPLICATIONS FOR THE ADVERTISING PRACTITIONER

Advertising is a form of mass communication and, as such, it is one of the more complex processes that academicians have subjected to rigorous study. Even when one views this process in the context of an elementary communications model, it is clear that advertising should not be analyzed as a simple relationship between an easily defined stimulus and a readily measurable response. The elementary communications model developed by the political scientist and educator, Harold Lasswell, for example, can be used to describe the advertising process in terms of five important variables. Known as the 5-W approach, this model states that we must consider *who* says *what* to *whom* through *which channel* with *what effect*, if we are to understand in the most basic sense how people communicate with one another.[1]

Enumeration of A.A.A.A. Grants in the Context of the Communications Process

By *who*, in the Lasswell model of the communications process, we mean the source or sender of the message. Aspects of the process related to the sender are often called communicator-bound factors. In the case of advertising, of course, the communicator is not always easily defined because the sender can be thought of as an organization, an individual, or an agent or spokesman for an organization or individual. Decisions involving sources of messages are certainly important ones for the advertising practitioner; for they can have an impact upon audience response. One of the A.A.A.A. grantees investigated communicator-bound factors, that is to say, characteristics of *who* sends the message and how they may affect the way people respond to it. A series of studies by this researcher compared the personality characteristics of professional advertising communicators with those of the general population. The implication of this research was that if significant differences were found, then they would constitute possible criteria for hiring and training successful professional advertising communicators. One can readily see that in considering the effects of the advertising process, advertising practitioners cannot ignore the *who* aspect of the communications process. It was certainly not overlooked in the A.A.A.A. Grant Program.

The *what* aspect of the Lasswell communications model refers to the message itself. Researchers often label this aspect of the process, associated with *what* is said, the message-bound factors. Five grants in the A.A.A.A. program pertain directly to the study of message content, and how content of the message affects responses to the communication. The message-bound factors have traditionally generated more research than any other aspect of the communications process, probably because they are among the most readily controllable variables in the process. Decisions regarding the advertising message are thus of central concern to the advertising practitioner; and they involve an aspect of the communications process where increased knowledge can directly improve the quality of his decisions.

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[1] See Harold Lasswell, "The Structure and Function of Communication in Society," in Lyman Bryson, ed., *The Communication of Ideas* (New York: Harper & Row, 1948). For another discussion of this model in an advertising context, see S. Watson Dunn, *Advertising: Its Role in Modern Marketing* (New York, Holt, Rinehart and Winston, 1969), pp. 59-60.

The advertising practitioner must also be concerned with the whom aspect of Lasswell's communications process. This represents the audience of the message and refers to any characteristics of that audience which may affect responses to the communication. Often called audience-bound factors, these characteristics are less subject to the advertiser's control than are the message-bound factors discussed above. That is, the advertiser cannot change the nature of the audience as easily as he can modify the message. However, the advertiser can often determine which audience represents the most receptive target for his message; and on the basis of this definition, he can direct his message to that most receptive audience. It is clear that the effectiveness of the practitioner's decision depends upon his knowledge of audience characteristics and the way that these characteristics affect receptivity to the message. The importance of these audience-bound factors in the communications process is evidenced by the fact that seven of the A.A.A.A. grants deal directly with the relationship between audience characteristics and responses to persuasive communications.

Aspects of the communications process related to which channel are inextricably associated with message-bound factors, since the character of the message is affected by the medium in which it is transmitted. Nevertheless, the communication channel itself--whether it be word-of-mouth, broadcast, or print--has an effect on the nature of response to the communication. Advertising weight, reach, and frequency are also intimately related to selection of communications channels. Three A.A.A.A. grants deal directly with channel-bound factors; and two consider the issue of advertising weight; how much is spent; while one involves the effects of advertising frequency on the nature of response.

Finally, with regard to the last stage of the Lasswell model, we consider the issue of what effect. This refers to a wide range of possible responses to a communication, which includes individual responses such as learning, attitude change, and overt action, as well as aggregate responses such as changes in market share, or changes in the society or culture. All of the 22 A.A.A.A. grants deal in some sense with the effects of the communications process. Some concentrate on relationships between one or more of the other stages in the process and how these determine short- or long-term communications effects. An example of a short-term effect may be a momentary change in individual attitudes or behavior. The aggregate responses that manifest themselves in social or economic change may be considered long-term effects. Three of the A.A.A.A. grants deal with the issue of social effects, and two investigate economic effects. Still other grants consider the relationship between two or more types of advertising effects, as for example, the relationship between changes in beliefs about a product and changes in attitude toward that product. These studies, thus, deal not with the influence of one stage of the communications process on communications response, but rather the influence of one type of communications response on another type of response.

Now that we have considered each stage of the communications process and enumerated the A.A.A.A. grants dealing with each, it should be noted that some of those grants investigate more than one stage of the process simultaneously and monitor their combined effects. For example, two grants investigate the interaction of message characteristics and audience characteristics in affecting communications response. The implication of such interaction is that different types of people may respond differently to the same message, and different messages may influence particular types of people differentially. Another research grant considers the interaction of audience-bound and channel-bound factors. Still more complex investigations encompass the whole communications process, in that the combined effect of all the various stages in the process are monitored. These studies constitute a recognition of the intricate networks of causality in the communications process and a desire to enlarge our knowledge about these complex interactions.

Four of the grants deal largely with methodological issues, such as the investigation of new research tools and technology. These methodological studies help to improve the sensitivity and validity of measuring instruments and to develop data analysis procedures. While the value of these improved methodologies may be readily apparent to the advertising practitioner, it is important to discuss explicitly their benefits as well as the practical implications of the overall A.A.A.A. Grant Program in light of the above enumeration of research areas investigated. What kind of knowledge, for example, should we expect to derive from pure academic research in advertising? Can the knowledge gained in these research studies be easily and confidently applied to a specific decision-making situation? These are the questions that will be considered in the next section.

Implications for the Advertising Practitioner

The type of knowledge we should expect to derive from pure academic research in advertising can be called "scientific knowledge." This means knowledge that is firmly based on observation, theory, and in most cases, on the use of experiments and complex equipment. Furthermore, scientific knowledge is characterized by predictions emerging from these theories, from previous observation, and experimentation. Advocates of the scientific method claim that it results in a level of successful prediction not otherwise possible.

Thus, in academic advertising research, we can expect to encounter many theoretical statements about processes underlying observable advertising effects. In addition, we can expect predictions based on these theories, as well as experiments designed to confirm or disconfirm them. Thus, it often appears that the academic researcher's major interest is in theory or processes underlying observable phenomena rather than in the phenomena themselves; but it must be recalled that his ultimate interest is an accuracy of prediction not available with any other method. By understanding the processes underlying a phenomenon, the scientist can specify conditions under which the phenomenon will or will not occur. Thus, by being concerned with theory and process, which is to say an understanding of the causes underlying a phenomenon, the scientist can improve his predictive accuracy with respect to that phenomenon.

We are now in a better position to consider the question of whether scientific knowledge gained in academic advertising research can be easily and confidently applied by the advertising practitioner to a specific decision-making situation. The answer to this question is affirmative, with a major qualification: the scientific knowledge must be pervasively true under all conditions; or alternatively, the set of conditions under which a predicted phenomenon is true must be specified. Here we encounter a problem with advertising research, largely attributable to the complexity of the process with which we are dealing, the communications process.

It will be recalled that many conditions associated with each stage of the process--communicator, message, channels, audience, effects--can exert an influence on the communications response. Furthermore, the combined effects of two or more conditions may be different from the effects of each taken separately. That is, the total effect of two or more conditions may not be equal to the sum of their individual effects. Thus, the pervasively true, or widely generalizable, principle or prediction does not often occur in an advertising context. There are few, if any, "laws" of scientific advertising that do not break down in certain situations. It is, therefore, up to the advertising researcher to seek not only lawful relationships but also to specify as best he can the situations under which those relationships are valid. At the present time, these situations cannot always be specified, for they are as numerous as the combinations of conditions in the stages of the communications process, and as complex as human behavior itself.

Thus, the advertising practitioner must view the findings of the academic advertising researcher as clues for predication in his specific situation, and make expert judgments as to the generalizability of the research findings to his decision-making context. The researcher aids this judgment process by stating explicitly the conditions of his own experimentation. Additional research performed in the practitioner's specific decision context can also be of aid in this judgment.

It can be seen, then, that the role of the academic advertising researcher is a crucial one to the extent that an understanding of the processes underlying advertising response produces greater predictive accuracy. However, the transfer of academic findings to a specific decision-making context requires expert judgment aided by complete information regarding the academic research, coupled with additional situation-specific investigations. With the above considerations in mind, we turn now to a review of the grants awarded by the A.A.A.A. Educational Foundation for support of academic research in advertising. The grants are arranged alphabetically by university name. The academic titles of grantees and their university refer to the time that the grants were originally awarded. They do not necessarily reflect present position or title.

PART II

Summaries of the Research Projects

University: UNIVERSITY OF CALIFORNIA (Berkeley)

Area of Research: MODELS OF CONSUMER BEHAVIOR RELATING TO BRANDED PRODUCTS

Grantees: Dr. FRANCESCO M. NICOSIA, Chairman,
Marketing and International Business
University of California (Berkeley)

Working with: Dr. ROBERT FERBER,
Research Professor of Economics
Bureau of Economics & Business Research
University of Illinois

In order to understand the complex behavior leading to a decision to buy a product or service, the marketing researcher must have at his disposal a body of data containing measures of the important causal variables in the decision process. This may consist of measurements and tests of many individuals during one time period, accompanied by purchase information; or alternatively, the data may consist of information gathered over a period of time from a group of individuals, called a consumer panel. There are advantages to both types of data, but the consumer-panel type of data has the unique advantage of allowing the researcher to observe changes in purchase behavior over time that may be linked to changes in the hypothesized causal variables. Additionally, the long term effects of causal variables, such as advertising, can be monitored.

Method of Study

Dr. Nicosia and Dr. Ferber used their A.A.A.A. grant to set up a consumer panel of young married couples in two medium-size Illinois cities. This panel consisted of 313 couples who were interviewed five times during the period beginning in the spring of 1968, and ending during the fall of 1970. The researchers deliberately chose a small-city environment for their exploratory study in order to avoid the added complexity of family decision-making in the major urban areas. A substantial grant from the National Science Foundation has now allowed the research to be extended into the Chicago area, thus enabling a more intensive exploration of the relationship of advertising and other variables to consumer life styles and purchase behavior.

The focus of the early interviews centered on purchase decisions for consumer durables as well as decisions related to the accumulation of intangible assets. It is known that newly formed families make important decisions with respect to these product categories, and these decisions often determine their behavior throughout the marriage. The researchers hoped to gain new insights into the process of family decision-making, particularly with respect to the influences of marketing variables on these decisions. A complex model of family decision-making was the basis for selecting questions and tests that were administered in the five waves of interviews.

What Was Studied

Of particular interest was the hypothesized relationship between advertising and the accumulation of both tangible and intangible consumer investments. Examples of other possible influences that were investigated are as follows: income, education, expected wealth, personality characteristics, and long-run goals of the couple. Assets were ranked by respondents in terms of a relative preference criterion. This ranking was interpreted as an indicant of attitude toward the assets. These data allowed the researchers to test in part the complex model of family decision-making.

Results of Study

Interestingly, it seems that, so far, no appreciable effect has been found between advertising and attitudes toward tangible and intangible investments. This lack of effect may be due to the relative insensitivity of the measuring instruments used for measuring the attitude and advertising variables. Advertising exposure, for example, was measured in terms of whether or not advertisements had been noted by the individual. For a number of assets, this awareness of advertising was almost universal; and thus, it is understandable why variation in awareness would not be strongly related to variation in asset ranking. Results suggest that with respect to nondurables, advertising exposure may be significantly related to consumption. The case of liquor consumption is currently being investigated. Another advantage of the panel type of study is the possibility of modification of measures and addition of new measures during the study. This not only allows for improvements in the sensitivity of measuring instruments for the purposes of the study, but also is a contribution to test development methodology.

Application of Results

The A.A.A.A. grant has enabled the researchers to confirm the feasibility of their consumer panel design for collecting a wide range of information about the purchase decision process. It has also allowed them to partially test a complex decision model, and refine the measures that serve as input into that model. These advances in research and testing methodology and the concrete findings about consumer behavior stemming from this grant served as the basis for the more substantial grant to expand the consumer panel into the Chicago area. Thus, while the research funded by the A.A.A.A. grant is exploratory in nature, it makes possible the investigation of more complex processes and the development of a body of definitive research in the area of family decision-making.

BIBLIOGRAPHY

ARTICLES AND WORKING PAPERS

Ferber, Robert and Lucy Chao Lee, "Husband-Wife Influence in Family Financial Economic Behavior," Working Paper no. 81, College of Commerce and Business Administration, University of Illinois, Urbana.

Ferber, Robert and F. M. Nicosia, "Newly Married Couples and their Asset Accumulation Decisions," in Human Behavior in Economic Affairs: Essays in Honor of George Katona, North-Holland Publishing Co., 1972.

Nicosia, F. M. and Robert Ferber, "Patterns of TV Exposures and Changes in the Buying of Liquor, Beer, and Wine," working paper, Graduate School of Business, University of California, Berkeley.

Nicosia, F. M., Robert Ferber and R. Dunkle, "Multiple Discriminant Analysis: Searching for a Test of 'Statistical' Significance," working paper, Graduate School of Business, University of California, Berkeley.

Nicosia, F. M., Robert Ferber and J. Nonaka, "Dynamic Typologies of Alcohol Purchases among Young and Newly Married Couples," working paper, Graduate School of Business, University of California, Berkeley.

DISSERTATIONS AND THESES

Kwan, T. and R. Dunkle, "Types of Durable Goods Stock, Intentions to Buy, and Future Buying, among Young and Newly Married Couples," Part I and Part II, MBA thesis, University of California, Berkeley.

Rinehart, J. A., "Typologies of Insurance Buying Behavior in Young Married Couples," MBA thesis, University of California, Berkeley.

Suh, Raymond, "An Application of Multivariate Statistical Techniques for the Study of Consumer Buying Intentions for Durable Goods," Department of Business Administration, University of Illinois.

Taber, M. J., "The Dynamics of Durable Goods Stock and Intentions to Buy, with an Emphasis on Cars, among Newly Married and Young Couples," MBA thesis, University of California, Berkeley.

University: UNIVERSITY OF CHICAGO

Area of Research: ECONOMICS OF ADVERTISING

Grantees: Dr. LESTER G. TELSER, Professor of Economics
Economics Department
University of Chicago

Nature of Research

Much debate surrounds the issue of the effects of advertising on the firm and on the economy. These advertising effects differ in scope from most of the other communications effects studied under A.A.A.A. auspices in that they pertain not to individuals directly but to organizations, and they deal with the influence of advertising over a relatively long span of time. Such issues as the effects of advertising on rates of return and the effects of advertising on competition fall into the province of this investigation.

The results of two doctoral dissertations, one by Yoram Peles and the other by Harry Bloch, under Professor Telser's direction, support arguments contrary to those advanced by the Federal Trade Commission and by a number of economists, to the effect that advertising tends to reduce competition by raising the return above the competitive level. Such arguments are based upon the contention that as a firm's advertising expenditure increases, its measured rates of return increase. If accepted at face value, some empirical evidence seems to support this hypothesis; but Bloch and Peles note that the method for calculating a firm's assets accounts for the apparent positive relationship between advertising expenditure level and rates of return. When intangible assets are included in the calculation of the firm's book value, and when current advertising outlays are corrected to include provision for amortizing advertising capital, estimates of the rates of return on advertising capital are closer in line to the return on other forms of capital.

Rates of Amortization in Three Industries

In order to measure the value of intangible assets such as advertising, it is necessary to calculate their annual rates of amortization. One dissertation study of three industries--beer, cigarettes, and new passenger cars--concentrated on the demand functions of individual firms, deriving industry demand through the combined effect of all firms in the industry. The rate of amortization for beer industry advertising was found to be 40-50% per annum and 35-40% per annum in the case of the cigarette industry. Estimates for the automobile industry were not reliable. In the cases of the car and cigarette industries, advertising was positively related to overall industry demand. Sufficient evidence was lacking, in the case of the beer industry, to assert that a similar positive relationship exists between firms' advertising and industry demand.

Influence of Advertising on Competition in Beer Industry

The second dissertation in this research program employed the theory and findings on rates of amortization of advertising in order to estimate the influence of advertising on competition in the beer industry. Treating advertising as an intangible asset, the study assumed that firms which advertise provide a service to the consumer. This service can be considered a commodity, supplementary to the firm's physical output. Thus, a firm that provides an advertising service can be viewed as a supplier of joint products. With these premises as a basis for analysis, it was found that advertising is consistent with the theory of a competitive economy. In the case of beer, which is a heavily advertised product, competitive conditions were found to prevail in the marketplace, thus nullifying the assumption that advertising reduces competition.

In addition to the analysis of competition in the beer industry, an examination and critical evaluation were made of the FTC report on rates of return to large food manufacturing companies. The results indicated that the FTC's finding of a positive relationship between rates of return and advertising to sales ratios can be attributed to failure to measure the firm's capital correctly. By using the improved method of asset estimation developed in the research program, it was found that in the case of steady state firms, the true rate of return is below the measured rate. Thus, the FTC's findings can be attributed to the use of conservative accounting practice, which does not include intangible assets, such as advertising and research-and-development outlays, as part of the firm's book value.

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BIBLIOGRAPHY

ARTICLES

Bloch, Harry, "Advertising and Profitability: A Reappraisal," Journal of Political Economy (forthcoming).

Brozen, Yale, "New FTC Policy from Obsolete Economic Doctrine," Anti-Trust Law Journal, 41 (1973), pp. 477-487.

Peles, Yoram, "Economies of Scale in Advertising Beer and Cigarettes," Journal of Business, 44 (January 1971), pp. 32-37.

Peles, Yoram, "Rates of Amortization of Advertising Expenditures," Journal of Political Economy, 79 (September-October 1971), pp. 1032-1058.

Peles, Yoram, "The Recording of Advertising Expenditures in the Financial Statements," Journal of Accounting Research, (Spring 1970), pp. 128-137.

DISSERTATIONS (University of Chicago)

Bloch, Harry, "Advertising, Competition, and Market Performance".

Peles, Yoram, "Rates of Amortization of Advertising Expenditures".

University:	UNIVERSITY OF CINCINNATI
Area of Research:	CONSUMER INFORMATION HANDLING
Grantee:	Dr. JEROME B. KERNAN, Professor of Behavioral Analysis College of Business Administration University of Cincinnati

Purpose

The purpose of this research program, which is still in progress, is to investigate the nature of mental processes that intervene between an observable stimulus, such as an advertising message, and an overt behavioral response, such as product purchase. While it may seem that only the stimulus and ultimate response are of practical interest to the advertising manager, an understanding of the internal mechanisms associated with information acquisition, processing, and utilization will ultimately improve the accuracy of response prediction for a variety of situations and for a wide range of individual types. Such an understanding promises a theoretically richer basis for many marketing decisions, including those related to message and segmentation strategies.

Purchasing, consuming, and communicating are all types of behavior of interest to the marketer. Information handling is also a type of behavior, but it is unique in two ways. First, it cannot be observed directly; so the way individuals handle information can only be inferred. Second, it is a necessary condition for all the other tvpes of behavior to occur. That is, information must be acquired, processed, and utilized before purchasing, consuming, or communicating can take place. Thus, an understanding of information handling is central to our understanding of other types of consumer behavior. Because it deals with mental states that are not observable, information handling behavior is a difficult topic to study. This difficulty does not make our understanding of it less essential, however.

Elusiveness of Subject

The elusiveness of information handling behavior requires that theories be developed that link unobservable mental processes with observable phenomena. If the phenomena occur as predicted by hypotheses stemming from the theory, then the theory is supported and we have some confidence that the processes that are not observable are being described accurately. It is not surprising that theoretical development and testing of theory have occupied the attention of Dr. Kernan and his associates in the initial phases of this research program. New theoretical perspectives have emerged from the research, which provide insights into the nature of information handling. Additional theoretical work is exploring the influence of environmental and personality characteristics in affecting the way information is handled. The findings suggest that information acquisition, processing, and utilization may vary across situations and individuals.

Information Acquisition, Processing and Utilization

Turning now to each of the three components of information handling, we note that information acquisition is associated with the sensing, attending to, comprehending, and selection of cues from the environment. It starts with sensory reception and ends with perception of cues. At that point, some meaning has been assigned to the environmental cues. Information processing refers to mental activities such as sorting, scaling, computing, evaluating and storing. This is the most difficult component to study, since no aspect of it is directly observable. The formation and change of attitudes is particularly relevant to the advertiser, and these processes are associated with the information processing component. The third component deals with the question of what the individual does with the information. Information utilization can be associated with the study of memory, its tenure and retrievability; the effect that new information has on existing beliefs; and the relationship between changes in information and changes in behavior.

Four Doctoral Dissertations

The research grant has resulted in numerous working papers, which have formed the basis for theoretical extension of the information handling paradigm. At least four doctoral dissertations will stem from this work. One of them compares different methods for predicting product and person perception, evaluation, and usage or affiliation. Of particular interest is a psychographic scale designed to measure activities, interests, and opinions associated with an individual's life style. What are the latent dimensions of this instrument, and how does it compare with less comprehensive measures as a predictor of response to products and people?

Another doctoral dissertation in progress investigates the relationship between brand attitudes and brand loyalty. It also explores the way marketing decisions may affect this linkage.

The third dissertation studies the relationship between an individual's store patronage and his personal characteristics, including attitudes, personality, and socioeconomic characteristics.

The fourth explores the search behavior of individuals who are in the market for a new house. The searchers are divided into two groups depending on whether they are residents or non-residents of the metropolitan area in which they are searching. The study focuses on differences between the search styles of residents compared to the search behavior of non-residents.

Additional research in information handling investigates the effect of cue treatments (color intensities of tooth polishes) on attitude structure. Do different beliefs about the products best discriminate among potential users; or is the best predictor of potential use the value placed on the same set of beliefs?

The above research is only indicative of the areas of research currently being investigated. This ambitious research program, by improving the state of knowledge about information handling, is producing theoretically significant and eminently practical results.

BIBLIOGRAPHY

ARTICLES AND PAPERS

Greeno, D. W., M. S. Summers and J. B. Kernan, "Personality and Implicit Behavior Patterns," Journal of Marketing Research, 10 (February 1973), pp. 63-69.

Hisrich, R. D., R. J. Dornoff and J. B. Kernan, "Perceived Risk in Store Selection," Journal of Marketing Research 9(November 1972), pp.435-439.

Kernan, J. B., "Comments on the Role of Summated Attribute Models in the Central Processing of Information," paper presented at the ACR/AMA Workshop on Buyer/Consumer Information Processing, University of Chicago, 1972.

Kernan, J. B., "Her Mother's Daughter? The Case of Clothing and Cosmetic Fashions," Adolescence (forthcoming).

Kernan, J. B., "Human Information Handling," paper presented at the American Marketing Association Doctoral Consortium, University of Illinois, 1971.

Kernan, J. B., "The CAD Instrument in Behavioral Diagnosis," in Gardner, D. M. (ed.), Proceedings: Second Annual ACR Conference, College Park, Maryland, Association for Consumer Research, 1971.

Kernan, J. B. and L. B. Heiman, "Information Distortion and Personality," Journalism Quarterly, 49 (Winter 1972), pp. 698-701

Kernan, J. B. and R. Mojena, "Information Utilization and Personality," Journal of Communication (forthcoming).

Kernan, J. B. and L. L. Schkade, "A Cross-Cultural Analysis of Stimulus Sampling," Administrative Science Quarterly, 17 (September 1972), pp. 351-358

Kernan, J. B. and G. G. Trebbi, Jr., "Interpersonal Attraction and Information Processing," paper presented at the American Marketing Association Doctoral Consortium, University of Texas, 1972.

Kernan, J. B. and G. G. Trebbi, Jr., "Attitude Dynamics as a Hierarchical Structure," Journal of Social Psychology, 89 (December 1973), pp. 193-202.

Kernan, J. B., "Her Mother's Daughter? The Case of Clothing and Cosmetic Fashions," Adolescence, Vol. VIII, 31 (Fall, 1973), pp. 343-350.

Mojena, R. and J. B. Kernan, "Alternative Formulations of the Information-Theoretic Measure in a Decision Context," in Murphy, D. C. (ed.), Recent Developments in the Decision Sciences, Boston, American Institute for Decision Sciences, 1972.

University: COLUMBIA UNIVERSITY

Area of Research: RELATION BETWEEN ADVERTISING AND BUYER BEHAVIOR

Grantees: Dr. JOHN A. HOWARD, Professor of Marketing
Dr. JOHN U. FARLEY, Associate Professor of Marketing
Graduate School of Business
Columbia University

Purpose of Research

This A.A.A.A. Foundation grant, awarded jointly to Professors Howard and Farley, was used to develop and to test empirically a theory of the advertising process. The effort was, thus, broad in scope, involving a consideration of all stages of the communication process and their possible interaction. The effects of the communicator, message, channel, and audience all were considered. In addition to dealing with the advertising process as such, the researchers also sought to define the role of advertising within the context of other possible influences on the consumer, and across many situations. In this sense, then, the research can be viewed as part of a larger effort of the past decade to understand the complex system of stimuli and mental processes that determine the nature of buying decisions.

Three Phases: #1 - Media Choice Model

This ambitious project was divided into three research phases. The first phase focused on the media context in which audiences receive advertising messages. It consisted of the development and empirical testing of a choice model for television watching. This model of TV program choice, similar to voting models in political science, provides explicit criteria for predicting program selection, given a set of available alternatives and knowledge of aggregate choice patterns. Unlike other media choice models which require detailed individual responses as input, this model is designed to predict individual choice on the basis of relatively inexpensive viewing data provided on a regular basis by syndicated services. In fact, the data for testing the model were gathered by Brand Rating Institute and consisted of responses to questions on television watching, administered to a nationwide sample over a period of one month.

The model can be used to predict individual choice, given a set of known alternatives. It can also be employed by the advertiser to select program alternatives that are similar to the "ideal" preferences of particular market segments. Although significant predictions of choice have resulted from its use, the choice model offers potential for further refinement, possibly involving the segmentation of prospective audiences into more homogeneous groupings or modification of some of the mathematical assumptions used in specifying choice criteria. The model can, furthermore, be extended to include not only predictions of "preferred" program but also "preferred mix of programming." At the present stage of development, it can predict individual viewing more accurately than do simpler models of aggregate viewer choice based on network loyalty or group averages.

#2 - Mental Processes of Advertising Perception

The second phase of the study involved the further development and refinement of a theory of the internal mental processes of advertising perception. Causal relationships between advertising stimuli, internal mental states, and overt behavior were hypothesized. For example, an advertising stimulus was hypothesized to affect memory of advertising content, which in turn affects brand comprehension, confidence in judging the brand, and intention to buy it. Brand comprehension was viewed as also affecting attitude toward the brand, which also is related to one's intention to buy the brand. Buying intention was hypothesized to be related strongly to actual purchase behavior.

The relationships just outlined have been subjected to extensive empirical testing, using panel data applied to a set of mathematical equations flowing out of the theory. The equations were solved by computer, resulting in estimates of the relative strengths of each influence on buyer behavior as well as estimates of the relationships among the various influences themselves. Thus, within a particular product category under stable conditions, it may be possible to predict, for example, the strength of the relationship between an individual's advertising recall and his understanding of the brand, or the strength of the relationship between brand comprehension and brand attitude. Other studies in this phase of research examined the structure of attitude and other internal mechanisms pertinent to the theory.

#3 - The Nature of the Advertising Message

The third phase of experimentation related to the nature of the advertising message itself. In order to determine the effect of any stimulus, it is necessary to define that stimulus precisely in terms of its content. Otherwise, it would be impossible to know, for example, whether an observed effect was caused by an advertisement or some other stimulus. Thus far, panel studies have been conducted in which a methodology was tested for analyzing the content of television, magazine, and newspaper advertisements in terms of attitudinal, comprehension, and intention components.

Work is continuing on this extensive research program into factors that affect the predictive power of the theory. The theoretical structure is flexible and subject to revision on the basis of new empirical evidence. At the present stage of development, the structure has proved useful as a guide for marketing research and as a basis for recommendations to the Federal Trade Commission regarding advertising and public policy. In addition, the report to the Federal Trade Commission contains an appendix with a thorough review of advertising research. This review is intended to help the marketing manager as well as the public policy-maker gain a better understanding of the communications process in general.

The theory of the advertising process has proved to be useful as a framework for interpreting social criticism of advertising and for giving direction to future practical research on its social effects. This research will not only furnish empirical data for evaluating the arguments of social criticsm, but it can also serve as a rational basis for formulating specific industry guidelines.

BIBLIOGRAPHY

ARTICLES AND PAPERS

Bluestein, A., N. Capon, J. U. Farley and J. A. Howard, "The Structure of Attitude: An Empirical Investigation," paper presented at AMA meeting, August 1973.

Bowman, Gary W. and John U. Farley, "TV viewing: application of a formal choice model," *Applied Economics*, 4(1972), pp. 245-259.

Farley, J. U. and J. A. Howard (eds.), *Control of Noise in Marketing Data* (forthcoming).

Farley, John U. and L. Winston Ring, "An Empirical Test of the Howard-Sheth Model of Buyer Behavior," *Journal of Marketing Research*, 7(November 1970), pp. 427-438.

Farley, John U. and L. Winston Ring, "Empirical Specification of a Buyer Behavior Model," *Journal of Marketing Research* (forthcoming).

Holbrook, Morris B., "A Review of Advertising Research," appendix in Howard, John A. and James E. Hulbert, *Advertising and the Public Policy*, Chicago, Crain Communications, 1973.

Howard, J. A., "Theory of Consumer Behavior," in Farley, John U., John A. Howard and L. Winston Ring (eds.), *Consumer Behavior: Theory and Application*, Allyn & Bacon, 1973.

Howard, John A. and Spencer F. Tinkham, "A Framework for Understanding Social Criticism of Advertising," *Journal of Marketing*, 35(October 1971), pp. 2-7.

Lehmann, Donald R., John U. Farley, and John A. Howard, "Testing of Buyer Behavior Models," *Proceedings of the 2nd Annual Conference*, Association for Consumer Research, 1971.

DISSERTATIONS

Bowman, Gary W., "Television: A Study of Program Choice and Institutions," unpublished doctoral dissertation, Carnegie Mellon University.

Capon, Noel, "An Experimental Study of the Relationship between Message Content and Salesman-Customer Interaction," doctoral dissertation, Columbia University (forthcoming).

Larouche, Michel, "A New Approach to Consumer Behavior and Segmentation by Use of Orthogonal Polynomials," dissertation, Columbia University (forthcoming).

University: CORNELL UNIVERSITY

Area of Research: BUILDING PREDICTIVE MODELS OF EFFECTS OF MARKETING COMMUNICATIONS ON PURCHASE BEHAVIOR

Grantee: Dr. G. DAVID HUGHES, Burlington Industries Professor of Business Administration
School of Business Administration
University of North Carolina

(Grant was awarded when Dr. Hughes was Associate Professor of Marketing, Graduate School of Business and Public Administration, Cornell University)

Purpose and Method

The purpose of the research sponsored by this grant was to develop a reliable and economical procedure for studying marketing communications and the decision process leading to brand purchase. A major methodological contribution of the study was the design and implementation of a computer-controlled experimental technique, which enables investigators without technical research skills to design a sophisticated communications experiment in less than an hour, simply by answering a sequence of questions asked by the computer via a teletype installation. In essence, this technique requires only that the experimenter have rudimentary typing skills and a clear conception of the problem to be studied. After the experiment is set up, individuals in the subject sample interact with the computer by responding to experimental stimuli such as advertising messages, which are presented to them in a manner specified in the experimental design. The subjects' responses are stored and statistically analyzed by the computer, thus avoiding the task of coding questionnaire responses and then subjecting them to analysis.

The computer-controlled experimental technique is efficient in terms of speed of administration and analysis, and is relatively inexpensive to implement compared to other, more traditional, experimental procedures. Through the use of high-speed portable remote terminals, an experiment can be replicated in different geographical areas and for different population segments; and the results can be analyzed in a matter of hours instead of days or weeks. Because the experimental design and administration can be exactly duplicated for each replication, the degree of experimental control is greater than would be possible with other experimental methods.

The computer-controlled technique has proved to be a reliable method of experimentation, in that results are stable across replications. Furthermore, they are consistent with the results of traditionally administered communications experiments. Interviews with subjects following their interaction with the computer also suggest that, for a majority of respondents, the testing situation is sufficiently realistic to produce responses that would be generalizable to a "real world" marketing context. Further testing in the field is required, however, before definitive statements can be made about this aspect of validity. The computer-controlled technique is quite flexible and can be used to monitor responses to simple but easily defined stimuli;

or if greater realism is desired, it can measure responses to realistic but complex stimuli, such as advertisements. A certain lack of realism may be desirable to the extent that it allows the experimenter to refine experimental design, thus obtaining strong statistical relationships between well-defined stimuli and responses to them. Such a highly controlled experimental context could prove quite advantageous to the marketing practitioner. In the exploratory stages of marketing research, for example, computer-controlled experiments would enable the marketer to consider and evaluate more alternative product and promotion strategies than would be possible in the context of expensive field tests. The better alternatives, of course, could later be tested in the field.

Computer Model of the Buying Decision Process

After the computer-controlled technique was developed, it was applied to a wide range of communications problems involving consumer choice. Out of this series of studies is emerging a model of the buying decision process that should be useful in guiding the design of future marketing research. Findings to date are pertinent to a number of marketing decision areas.

One study of automobile brand switching demonstrated the utility of the computer-controlled experimental method for advertisers. The most important finding was that changes in the likelihood of buying an automobile brand are strongly related to changes in attitude toward that brand. This finding relates a communications objective to a marketing objective, thus making it possible to place an expected value on an advertising campaign designed to change attitudes. In addition, it was found that brand loyal subjects tended to receive and process persuasive information in a selective manner. Thus, models of advertising effectiveness should take into account the variable of brand loyalty, since it seems to bias subjects' perception of persuasive communications.

Personality Variables Affect Information Processing

The research suggests that models of advertising should also take into account personality variables, such as risk-taking propensity. Rather than directly affecting brand choice, such personality variables seem to be related to how a person processes new information. The nature of the information processing in turn seems to determine brand choice. Thus, personality variables seem quite pertinent in the marketing communications process, thus indirectly affecting brand choice in a complex and sometimes unexpected way.

Five additional studies have been conducted in order to study the communications process and test the computer-controlled experimental method. One study demonstrated that it is easier to increase the positivity of slightly favorable attitudes than it is to reverse unfavorable ones. While this finding has direct implications for advertisers, it also is theoretically important for understanding the nature of the communications process. The importance of brand loyalty in affecting the processing of new information was repeatedly confirmed in the additional experiments.

The technique was applied to an organizational buying behavior context, and it was demonstrated that the decision environment affects the nature of information processing. Specifically, persons in risk-averting organizations were strongly influenced by negative information, while persons in risk-taking organizations responded more strongly to favorable information. This finding is consistent with the findings of other researchers using different experimental techniques. The implication for the advertiser is clear: copy themes should reflect a decision maker's perception of the riskiness of his environment.

One advantage that the computer-controlled technique offers is the capacity to monitor in units of one ten-thousandth of a second the time that it takes an individual to respond to marketing stimuli, by using the clock in the computer. Findings suggest that the rapidity of response is related to favorability of message content. Favorable messages were processed most rapidly and neutral messages least rapidly. This result indicates that response time may constitute an unobtrusive measure of message favorability, thus being potentially useful to the advertiser in his analysis and evaluation of message content.

All these findings support the notion that the computer-controlled experimental methodology is an efficient and reliable means to study marketing communications and buyer behavior. As a result of such findings, a new model of buyer behavior is being developed which is being tested in the process of its development. The result will be similar to other models of buyer behavior, but will have the advantages of simplicity and empirical support at each stage of development.

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BIBLIOGRAPHY

ARTICLES

Hughes, G. David, "Predicting Bank Deposits and Loans," Journal of Marketing Research, 7(February 1970), pp. 95-100.

Hughes, G. David and J. Guerrero, "An Empirical Test of the Fishbein Model: Its Implications for Advertising and Marketing Research," Journalism Quarterly (forthcoming).

Hughes, G. David and J. Guerrero, "Automobile Self-Congruity Models Reexamined," Journal of Marketing Research, 8(February 1971), pp. 125-127.

Hughes, G. David and J. Guerrero, "Simultaneous Concept Testing with Computer-Controlled Experiments," Journal of Marketing, 35(January 1971), pp. 28-33.

Bibliography (Cont'd)

Hughes, G. David and J. Guerrero, "Testing Cognitive Models Through Computer-Controlled Experiments," Journal of Marketing Research, 8(August 1971), pp. 291-297.

Hughes, G. David and P. Naert, "A Computer-Controlled Experiment in Consumer Behavior," Journal of Business, 43(July 1970), pp. 354-372.

Hughes, G. David, P. Naert and S. Tinic, "Analyzing Consumer Information Processing," Proceedings, American Marketing Association, August, 1969, pp. 235-240.

University: FLORIDA STATE UNIVERSITY

Area of Research: A TEST OF EMPATHIC SKILLS IN PROFESSIONAL ADVERTISING COMMUNICATORS

Grantee: Dr. EMMA AUER, Associate Professor of Marketing
School of Business
Florida State University

(Note: This summary was edited by Dr. Auer)

Purpose:

Of all the research studies funded by the A.A.A.A. Educational Foundation grant program, this is the only one which concerns itself directly with the testing of advertising communicators for skills which by inference may be related to professional success in communication. Dr. Auer's grant is unique in that the theoretical basis for its major hypothesis is the two-way, transactional model of human communication published by symbolic interactionist, social psychologist Dr. J. Edward Hulett, Jr., in 1966.[1]

Hulett's model strongly suggests that successful two-way human communication (advertising can be defined as such) depends upon the possession by both communicator and receiver of core skills identified variously as social intelligence, social acuity or empathy. Such empathic skills have been defined by Urie Bronfenbrenner as of two major types: (1) sensitivity to individual differences (interpersonal sensitivity); and (2) sensitivity to the generalized other (awareness of the typical response of a large class or group).[2] Empathic skills as defined by Bronfenbrenner are shown in the Hulett model to be needed by message generators for accurate judgment of (1) self; (2) others (individual and stereotypic); (3) what-to-say (suitable for the situation); and (4) probable reception of what-is-said (in a given situation).

Dr. Auer's research hypothesis (tested in null form, of course) is that professional advertising communicators will be more empathic than the population in general.

Methodology

Four hundred and sixty-four professional communicators in 12 Four As agencies in 5 cities in the U.S. were tested for both major types of empathic skill cited. Tests of sensitivity to individual "others" (Type I tests) utilized were four developed by J. P. Guilford and associates at the University of Southern California. The test of stereotypic understanding or sensitivity to the generalized "other" (Type II test) most successfully employed was the "Judgment of Interests" test developed by Ronald Leon Johnson at Michigan State University. Johnson had a sample mean for one group of psychology students at Michigan State when he filed his Master's thesis containing his test in 1963, but he invited further testing of, and use of his instrument.[3] Data collected by Dr. Auer in the form of JI scores of 464 agency personnel, 434 college students in 4 universities, and 59 high school students provide expanded comparison bases for a Type II test of empathic skills. All testing took place under the aegis of Dr. Hulett.

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[1] J. Edward Hulett, Jr., "A Symbolic Interactionist Model of Human Communication," *AV Communication Review*. Part I, Vol 14, No. 1 (Spring, 1966), pp. 5-33; Part II, Vol. 14, No. 2 (Summer, 1966), pp. 203-220.

[2] Urie Bronfenbrenner, John Harding and Mary Gallway, "The Measurement of Skill in Social Perception," *Talent and Society*, David C. McClelland (ed.) (Princeton, N.J.; D. Van Nostrand Co., Inc., 1958), pp. 39-40.

Results

Results of Type I testing show the agency sample to have a mean on combined Guilford test scores significantly different from that of the population mean established by Guilford (.001 level of significance, one-tailed test).[4]

The professional communicator sample produced a mean score on JI (Type II) tests significantly different (.001 level, two-tailed test) from that of the high school sample and of the total college sample. One agency sub-sample (account personnel) showed itself significantly more empathic (.05 level, two-tailed test) on the Type II test than the psychology sample at Michigan State in connection with which the test was developed.

On balance, professional communicators are shown to be a highly empathic group of people in comparison with other samples tested.

By inference it might be deduced that professional advertising communicators by virtue of their possession of skills in social acuity could be identified as potentially among the best qualified communicators in our society.

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[3] Ronald Leon Johnson, "Correlates of a Test of Group Sensitivity" (Unpublished Master's Thesis, Graduate School of Psychology, Michigan State University, 1963), passim.

[4] Because in the rigorous testing each Guilford test went through during its creation at the University of Southern California total score distribution was checked for normality and appropriate scaling techniques applied if data was other than normally distributed [Maureen O'Sullivan and J. P. Guilford, "Six Factor Tests of Social Intelligence" (Beverly Hills, California: Sheridan Psychological Services, Inc., 1966), p. 7] it was assumed in this study that social acuity or intelligence as measured by Guilford tests is normally distributed in the population as a whole. Guilford test means furnished as normative data were used as population means and Guilford standard deviations were used as population standard deviations. This assumption was checked with Dr. Nancy Wiggins of the Psychology Department and of the Institute of Communications Research at the University of Illinois. Dr. Wiggins approved this assumption in a letter to the author, June 14, 1968.

The results of this investigation suggest that the study of advertising within the theoretical framework of Hulett's model of communication can lead to additional insights into the nature of message generation and reception in two-way, transactional communication.

Dr. Auer is pursuing this theoretically promising avenue of investigation. She is currently studying the possible relationship between possession of empathic skill and patterns of media usage, innovative behavior, and opinion leadership in a consumer sample. Complete results of this investigation are not yet available.

BIBLIOGRAPHY

ARTICLES

Auer, Emma, "Are Professional Communicators Empathic?" in Auer, Emma and Elizabeth Danner (sp. eds.), Occasional Papers in Advertising, published by American Academy of Advertising, May 1971.

Auer, Emma, "Innovative Consumers--High Empathics?" in Gardner, David (ed.), Proceedings, 2nd Annual Conference, Association for Consumer Research, University of Maryland, 1971.

Auer, Emma, "Social Acuity Measurements in Generators and Receivers of Advertising Messages," in King, Robert L. (ed.), Abstracts from 1970 Annual Meetings of Southern Finance Association, Southern Management Association, Southern Marketing, Blacksburg, Virginia Polytechnic Institute and State University, 1971.

Auer, Emma, "The Function of Empathy: A Test of Professional, Student Advertising Communicators," Journalism Quarterly, 48(Fall 1971), pp. 560-561.

Auer, Emma, "Two Models Heuristic for Advertising Study," in Sargent, Hugh W. (sp. ed.), Occasional Papers in Advertising, published by American Academy of Advertising, September 1967.

DISSERTATION (University of Illinois at Urbana-Champaign)

Auer, Emma, "The Function of Empathy Represented in Transactional Models of Communications: A Test of Professional and Student Advertising Communicators."

University: HARVARD UNIVERSITY

Area of Research: MARKETING COMMUNICATIONS RELATED TO CONSUMER BEHAVIOR, THE COMMUNICATIONS PROCESS, AND ADVERTISING

Grantee: Dr. STEPHEN A. GREYSER, Professor of Marketing
Graduate School of Business Administration
Harvard University

The research funded by this grant explores a number of important aspects of advertising as a communications process. One can analyze each area of research in terms of the particular portion of the communications process of interest.

Psychological Pricing

For example, one research project dealt with psychological pricing and how audience characteristics affect the extent to which price communicates quality or affects purchase behavior. Thus, this study involved both message-bound communication factors (price information) and audience-bound factors (response as a function of individual characteristics). It also can be viewed as a study of the combined effects of message and audience factors on communications response. That is, message-bound factors and audience-bound factors were hypothesized to interact in affecting responses to price information. This research project was the basis for a dissertation employing an experimental design and 600 respondents. The results indicate that price indeed communicates quality; but this relationship was affected by a number of individual respondent factors. The price was not a strong enough indicant of quality to overcome initial product preferences. Its influence on judgments of quality, on the other hand, was strongest in cases when risk associated with purchase was perceived to be high, self-confidence was low, and tangible cues for judging the product were absent.

Interaction of Message and Audience Factors

A second dissertation also dealt with the interaction of message and audience factors in affecting communications response. In this case, however, the focus was on the persuasive appeal as the message-bound factor and on the needs and values of respondents as the audience-bound factors. Messages for an inexpensive dessert product were designed to appeal to specific audience segments, defined according to their value profiles. It was hypothesized that, across a wide range of responses, individuals would respond more favorably to appeals consistent with their value profiles than they would when exposed to general appeals which were not segment-specific. The findings did not support this hypothesis, since individuals tended to read their own values into the general appeal. To the extent that the results are generalizable, they suggest that the additional expense of multiple segment-specific appeals is not justifiable. Caution must be exercised, however, in generalizing these findings beyond the product category studied, since product-related factors such as salience or familiarity may have influenced the results.

How Marketers and Academic Researchers View Advertising

A third area of research funded by this grant dealt with the communications process as a whole. This investigation described and analyzed how marketing practitioners view the process of communications as it is related to advertising creation and implementation. Responses given by practitioners were compared with those of communications researchers. The results indicate that academic researchers tended to be concerned with widely generalizable models and propositions, while practitioners were concerned with areas of specific application to more immediate problems. This research constitutes an innovation, since there is scant literature on the interdependence of the academic and applied marketing disciplines. The overall purpose of the project was to explore ways that the two disciplines might interact more meaningfully in a mutually beneficial way.

Advertising and Public Policy

A number of studies supported by this grant investigated issues related to advertising and public policy decisions. Implicit in such studies are hypotheses concerning communication effects, often of a social or economic nature. One research project identified and explored the conflicting views of advertisers and government officials on the adequacy and usefulness of consumer information. The research results supported the hypothesis that marketing practitioners and government officials have differing views of the marketplace mechanism, which may account for their different stands on public policy issues. The findings form the basis for a proposal to resolve public policy questions by "test marketing" public policy in a manner analogous to product test marketing. For example, it was proposed that policy decisions concerning the unit pricing issue could be based upon field test results, evaluated in terms of social benefit criteria. Additional research projects in the public policy and consumerism area have been partially supported by this grant. Thus, it has contributed to a larger research program intended to advance knowledge through empirical research on this vital and timely issue.

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BIBLIOGRAPHY

ARTICLES AND WORKING PAPERS (INCLUDING MARKETING SCIENCE INSTITUTE PAPERS)

Courtney, Alice E., "Communications Models of the Advertising Process" (MSI project description, 1969).

Courtney, Alice E., "Practitioners' Conceptions of the Advertising Process: An Initial Look," working paper, MSI, 1970.

Greyser, Stephen A., "Advertising: Attacks & Counters" (FTC testimony), Harvard Business Review, 50(March-April 1972), p. 22.

Bibliography (Cont'd)

Greyser, Stephen A., "Assessing the Economic and Social Effects of Advertising," MSI monograph, 1971.

Greyser, Stephen A., "Businessmen Look Hard at Advertising," *Harvard Business Review*, 49(May-June 1971), p. 18.

Greyser, Stephen A., "Irritation in Advertising," *Journal of Advertising Research*, 13(February 1973), pp. 3-10.

Greyser, Stephen A., "Public Policy and the Marketing Practitioner: Toward Bridging the Gap," working paper, MSI, 1972.

Moran, Robert, "Consumerism and Marketing," MSI project description, 1969.

Moran, Robert, "Formulating Public Policy on Consumer Issues," working paper, MSI, 1971.

Shapiro, Benson P., "Price Reliance: Existence and Sources," *Journal of Marketing Research* (forthcoming).

DISSERTATIONS (Graduate School of Business Administration, Harvard University)

Courtney, Alice E., "Communications Research and Advertising Practice."

Feldman, Wallace, "A Study of Selective Marketing Communication."

Shapiro, Benson P., "Price as a Communicator of Quality."

University: UNIVERSITY OF ILLINOIS

Area of Research: SELECTED ASPECTS OF ADVERTISING RELATING TO INTERNATIONAL COMMUNICATIONS, CONSUMER BEHAVIOR, AND MARKETING MANAGEMENT

Grantee: Dr. S. WATSON DUNN, Head, Department of Advertising
College of Communications
University of Illinois

This grant funded a diversified program of both secondary and field research in the areas of international marketing communications, consumer behavior, and marketing management. The three areas of study were administered, respectively, by Dr. S. Watson Dunn; Dr. Arnold Barban and Dr. Joel B. Cohen; and Dr. Nugent Wedding. In addition to funding specific research inquiries, the grant provided "seed money" to expand significantly a comprehensive research program for faculty and Ph.D. candidates interested in advertising and related areas.

International Communications

The research in international communications supervised by Dr. Dunn has resulted, thus far, in three completed dissertations and one in progress. One of these is a study of attitudes toward advertising, which employed the same methodological approach as the A.A.A.A.-sponsored study entitled *Advertising in America: The Consumer View*. Rather than a cross-section of American consumers, however, this study surveyed attitudes and views of foreign students enrolled in U.S. universities and compared them with attitudes of U.S. students.

A second dissertation investigated the influence of advertising and other types of communication on the acculturation of an ethnic group in the United States. Respondents in this study were three generations of Japanese-Americans living in the Chicago area.

The third dissertation in the international area focuses on promotional decision-making within the multinational firm. It is based on data gathered from a cross-section of multinational corporations. The study analyzes the process by which international corporate marketing executives make decisions regarding transference of creative and media strategies from one country to another, decisions regarding level of expenditures in advertising and promotion. The Lens Judgment Model (based on the analogy of a convex lens through which one views the environment) provided the theoretical framework for this study. This model envisions the decision-maker in a complex environment who selects cues from that environment, weights them and then makes a decision. This model allows the researcher to study in quantifiable terms the decision process and to analyze decision criteria not evident through other means.

The quantitative data used in constructing the Lens Model were supplemented by extensive case study data collected in interviews with top international marketing executives in the United States and managing directors and marketing directors in western Europe. On the basis of the two approaches it should be possible to predict with increased accuracy the likelihood of a given advertising approach or promotional strategy being transferred successfully from one national market to another.

A fourth investigation currently in progress is designed to assess the ability of advertising in conjunction with differing combinations of other economic factors to improve the lot of a developing country. Two countries--Mexico and Brazil--are being studied intensively.

Consumer Behavior

Dr. Arnold M. Barban and Dr. Joel B. Cohen developed the consumer behavior research covered by this grant. The focus of the investigation which has already yielded significant results and promises to yield more, is the role of the consumer personality in determining product, brand, and media preferences. Additionally, the investigation focuses on the development of marketing strategies that are consistent with the characteristics of potential consumers. The classification of consumers, products, and marketing activity into meaningfully related categories should facilitate the making of more effective marketing mix decisions. Before such a classification, called a consumer-product-marketing activity "typology," could be developed, it was necessary to have valid and reliable measuring instruments that could be employed in field studies of personality and product perception. Such measuring instruments were developed in the process of this research program, and were subjected to validity and reliability testing.

Two field studies have been carried out which monitor personality, product perceptions, and media preferences. Products were judged along dimensions of "conspicuousness" and of "need-relatedness," a test of ego-involvement with the product. The first field study consisted of interviews with 200 persons in Champaign-Urbana, Illinois; and the second was a survey of approximately 500 individuals in Chicago. The latter study was performed in conjunction with the Survey Research Laboratory of the University of Illinois.

Thus far, relationships have been found between consumer personality characteristics and product and brand perceptions. Media preferences were also found to be associated with consumer personality categories. Additional studies suggest that consumer personality characteristics are related to responses to other aspects of marketing strategy, such as specific promotional appeal, brand preference and awareness, and frequency of product use. These findings, by providing a new basis for understanding the psychological processes underlying consumer behavior, promise new, potentially superior, methods of market segmentation, and improved creative and media strategies.

Several doctoral dissertations were completed as a part of this phase of the grant. Two doctoral research projects used the product typology as a part of their research protocol. Another dissertation student used data from the Chicago study--along with the typological framework--to extend the research into a specific aspect of advertising content.

Mathematical Models To Determine Advertising Effect and Optimum Budget Size

The research supervised by Dr. Nugent Wedding was designed to investigate, from a historical and analytical point of view, mathematical models of advertising effect and mathematical approaches to the determination of optimum size of the advertising budget. All available methods were critically evaluated, and attempts were made to develop original ones. Three major advertisers, Standard Oil of Indiana, Quaker Oats, and Anheuser Busch cooperated with the research effort by providing data to test the validity of the old and original models. However, the information furnished was not sufficient to provide a basis estimating parameters within the models or an adequate test of relative validity. Professor Wedding is currently searching for other companies which will provide the needed information. While this investigation delves into one of the most complex areas of marketing decision, it is also an area of decision where the potential benefits to the advertiser are most obvious.

Two other dissertations which are not directly related to these three areas were supported in part from this grant. One explored the influence of technology on advertising practice and its principal implications for advertising practice in the future. The other studied the practicability of transactional models as guides to the writing of more effective advertising copy.

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BIBLIOGRAPHY

ARTICLES AND PAPERS

Auer, Emma, "Are Professional Communicators Empathic?" paper presented at the Annual Meeting, American Academy of Advertising, East Lansing, Michigan, April 1970.

Auer, Emma, "Are Professional Communicators Empathic?" in Auer, Emma and Elizabeth Danner (sp. eds.), Occasional Papers in Advertising, published by American Academy of Advertising, May 1971.

Auer, Emma, "Innovative Consumers--High Empathics?" in Gardner, David M. (ed.), Proceedings 2nd Annual Conference Association for Consumer Research, University of Maryland, 1971.

Auer, Emma, "The Function of Empathy: A Test of Professional, Student Advertising Communicators," Journalism Quarterly, 48(Fall 1971), pp. 560-561.

Barban, Arnold and Joel Cohen, "An Interactive Consumer-Product Typological System, Proceedings 1st Annual Conference Association for Consumer Research, University of Massachusetts, 1970.

Barban, Arnold and Joel Cohen, "An Interactive Consumer-Produce Typological System: A Progress Report and Practical Evaluation," Research Report no. 12, Pennsylvania State University, December 1970.

Dunn, S. Watson, "The MCID Syndrome and European Marketing Practice," European Business (forthcoming).

Permut, Steven E., "Analyzing Environments for International Advertising: An Application of Hierarchical Factoring," paper presented at Joint Meeting of Academy of International Business and World Trade Conference, March 1973.

Permut, Steven E., "Decision-Making of the Multinational Executive: A Theoretical Perspective," paper presented at annual convention, Association for Education in Journalism, Southern Illinois University, August 1972.

Permut, Steven E., "Searching for Structure in the Multinational Environment," Journal of International Business Studies (forthcoming).

Pierce, Frank N., "An Intriguing Facet of Foreign Student Views of Advertising in the United States," paper presented at annual meeting, Association for Education in Journalism, 1971.

Pierce, Frank N., "Why Foreign Students Like or Dislike American Advertising," Journalism Quarterly, 47(Autumn 1970), pp. 560-564.

DISSERTATIONS AND THESES (University of Illinois at Urbana-Champaign)

Auer, Emma, "The Function of Empathy Represented in Transactional Models of Communications: A Test of Professional and Student Advertising Communicators."

Glover, Donald, "Influence of Advertising on Economic Development in Mexico and Brazil."

Goldberg, Marvin E., "Product Innovation: A Study of Personality Factors in Product Perception."

Hull, William D., "Purchase Consequences, Personality and Consumer Behavior."

Hupfer, Herb, "An Interactive Product-Consumer Typology for the Investigation of Brand Image."

Bibliography (Cont'd)

Dissertations and Theses (Cont'd)

Jugenheimer, Donald W., "Future Communication Technological Advances and Their Principal Implications for Advertising."

Nagata, Kiyoshi, "Study of the Influence of Communicational Interactions Upon the Acculturation of an Ethnic Group in U.S. Society: A Case Study of Japanese-Americans in Chicago."

Permut, Steven E., "Decision-Making of the Multinational Marketing Executive: A Quantitative Approach."

Pierce, Frank N., "Foreign Student Views and Attitudes Toward Advertising in the United States."

University: INDIANA UNIVERSITY

Area of Research: RELATIONSHIPS BETWEEN ADVERTISING, ATTITUDES, AND PURCHASE BEHAVIOR

Grantee: Dr. LEONARD J. PARSONS, Associate Professor of Marketing
Claremont Graduate School

(Grant was awarded when Dr. Parsons was Assistant Professor of Marketing, Graduate School of Business, Indiana University)

"Hierarchy of Effects" Theory

Several advertising theorists have hypothesized a "hierarchy of effects" characterized by a series of mental states leading ultimately to purchase. Each of these mental states, as well as purchase itself, can be defined as an advertising goal, or a criterion for monitoring advertising effect. For example, such hierarchies inevitably include a stage associated with beliefs or knowledge about the product; a stage associated with feelings about, or attitudes toward, the product; a behavioral intention stage; and, ultimately, an action or purchase decision stage.

Implicit in this idea of a sequence of mental states leading to purchase is the assumption that the stages themselves should be meaningfully related not only to advertising stimuli, but also to each other. That is, the characteristics of the mental states at one stage should logically influence or determine the nature of subsequent stages. An individual's beliefs or knowledge about a product, for example, should determine to some extent the nature of his attitudes toward the product. Similarly, one's attitudes toward the product should be meaningfully related to one's behavior toward it. This hypothesis of a hierarchy of effects assumes basically that consumer behavior is purposeful, and not merely an impulsive or "reflex" response to advertising stimuli.

What Was Studied

The research funded by this A.A.A.A. grant deals primarily with the study of various types of communication effects and the relationship between them. Specifically, it focuses on the relationship between consumer attitudes and consumer behavior, how strong that relationship is, and factors other than attitude that are also meaningfully related to product purchase. A second aspect of the research program concerns the possibility of segmenting markets on the basis of product purchase patterns. Market segments, so defined, are analyzed in terms of differences in demographic and socioeconomic characteristics.

Method Used

A major feature of both phases of the research is the use of longitudinal panel data--to observation of consumers over time and under natural conditions. An MRCA panel of 182 housewives supplied this data. Measurement over time provides insight into the sequential nature of advertising effects, thus allowing the researcher to test some of the sequential assumptions implicit in the hierarchy of effects concept.

Considering now the first phase of the research program, we note that the capability of consumer attitudes to predict product purchase was examined. Other commonly used predictors of purchase were also measured, and their predictive power was compared to that of the attitude predictors.

Fishbein Theory of Attitude Measurement

The specific attitude measure that was employed in the research is based upon an attitude theory developed by the psycholgist, Martin Fishbein. Like the advertising theorists who hypothesize a hierarchy of advertising effects, Fishbein asserts that beliefs about a product are related to, or are indicants of, one's attitude toward the product. In measuring attitude toward a product, Fishbein suggests that two belief-related measures are important: (1) the likelihood that a belief statement about the product is indeed true, and (2) one's evaluation of the concepts with which the product is linked in those belief statements. These two numerical measures--sometimes called, respectively, expectancy and value--are algebraically multiplied for each belief; and then, these factors are summed. The resulting number represents one's evaluation of, or one's attitude toward, the product.

The results of the study indicate that this Fishbein measure of attitude is a significant predictor of subsequent product purchase. However, its predictive power was no greater than five other commonly used predictors. Another interesting finding resulted from an investigation of factors which limit or moderate the relationship between attitude and behavior. Two such variables, involvement with the product and confidence in one's ability to judge the product, were found to be important moderators of the relationship between the summated attitude measures and actual purchase behavior. Thus, significant relationships were found between attitude and behavior; but attitudes did not constitute the only important determiners of purchase behavior.

Cluster Analysis

The second phase of the investigation employed a data analysis procedure called cluster analysis in order to segment a consumer panel into groups based on their product purchase sequences. Thus defined, these consumer segments were further differentiated in terms of demographics and socioeconomic profiles. When applied to other product classes, different market segments may be found. The application of this technique of segmentation suggests also that purchasing patterns within and between product classes may reveal similarities of market structure that can be useful to the advertising strategist.

Another area of application relates to a more meaningful method for classifying products than the simple shopping goods/convenience goods scheme.

By enabling the seller to characterize products in terms of the particular behavioral structure of his product class, this method of analysis facilitates the planning of strategy in terms of these patterns. Similar analysis within the product class will enable the seller to differentiate the behavioral patterns associated with his brand from those of competing brands.

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BIBLIOGRAPHY

ARTICLES

Taylor, Robert H., "Prediction of Consumer Purchase Patterns from Panel Data," paper presented at the 4th annual meeting, American Institute for Decision Sciences, November 1972.

DISSERTATIONS (Indiana University)

Kraft, Frederic B., "An Analysis of the Brand Evaluation-Brand Choice Relationship."

Taylor, Robert H., "Development and Test of a Procedure for Defining Market Segments Using Purchasing Behavior and Household Descriptors."

University: UNIVERSITY OF MICHIGAN

Area of Research: CONSUMER DECISION PROCESS

Grantee: Dr. JOSEPH W. NEWMAN, Professor of Business Administration
& Chairman, Marketing Faculty
Graduate School of Business Administration
University of Michigan

Purpose of Research

In recent years, a number of theories have been formulated which describe the activities and internal mental processes leading to a purchase decision. Some of these theories of consumer behavior hypothesize factors which determine the nature of information-seeking behavior, including factors affecting the time spent in making a purchase decision. Professor Newman and his colleagues are pursuing a research program designed to test some of these theories as they relate to information-seeking behavior. Their research is specifically intended to answer questions such as the following: Who makes the decision to purchase and how is this factor related to amount and kind of information seeking? How much seeking and use of information occurs? Does the amount and use of information vary as a function of product or consumer categories? What is the role of advertising as a source of information in the context of other information sources?

Method Used

In order to investigate these questions, interview data were gathered from a national random sample of 1,300 households in the United States, excluding Alaska. Of these households, 653 had bought a new car or one or more major household appliances during the 13 months preceding the interviews. These 653 respondents were extensively interviewed with regard to the new car purchase or, lacking that, their most recent appliance purchase. Thus, each interview focused on the purchase of only one product. This method yielded 217 interviews dealing with a car purchase and 435 dealing with the purchase of a color or black-and-white television set, a refrigerator or freezer, washing machine, kitchen range, or room air conditioner. In addition to specific questions about the car or appliance purchase, questions were also asked concerning experience with the product category, the individual's product purchase history, and the household's demographic categorizations. Both aided and unaided recall techniques were used in the interviews. The purpose of this extensive data collection effort was to investigate which factors, either used as separate predictors or combined into complex variables, best explain differences in information-seeking behavior.

Computer Techniques Used

In order to estimate the separate and combined effects of these factors, two sophisticated computer techniques--AID (Automatic Interaction Detector) and MCA (Multiple Classification Analysis)--were used in tandem. This constituted a methodological innovation, in that it provided an empirical method for determining which variables, in combination, best distinguish individuals with different levels of information-seeking behavior. In addition, the methodology enabled the researchers to investigate the interrelationship between explanatory variables and information-seeking behavior, as well as to determine the overall predictive power of these variables in accounting for individual differences in information-seeking.

Interest in the combined effects of explanatory variables stemmed from the recognition that, when considered singly, personal and product variables often do not adequately explain observed differences in behavior. Rather, the separate variables interact with one another in affecting behavior, thus making their combined influence of crucial importance to the researcher attempting to understand consumer behavior. Recognition of the importance of the combined effects of groups of variables has resulted in the formulation of complex explanatory variables, such as "life style." Such complex variables, consisting of groups of individual variables, can be viewed as new predictor variables, which supplement the predictive capability of the component variables. The data analysis techniques employed in this research enable the researchers to determine empirically which component variables interact with each other in affecting information-seeking behavior. Such interacting variables can be viewed, in combination, as a new complex variable of improving prediction.

Practical Implications

Thus far, the research program has yielded a number of findings on consumer information seeking behavior which have practical implications for the advertising strategist. It was found, for example, that about half the buyers of major consumer durables spend only a few weeks making the purchase decision. This means that there is a rapid turnover of prospective purchasers actively seeking information, suggesting that the advertising practitioner should adjust the timing and content of advertising to take this rapid turnover into account. The findings also suggest that the amount of information-seeking behavior varies as a function of previous experience and level of satisfaction with the product category.

These results give empirical support to the notion that product purchase and use can be interpreted as learning experiences, enabling the consumer to limit his subsequent information-seeking and decision time. Learning, however, cannot explain the substantial selectivity observed in information-seeking. For example, nearly 40% of the buyers with minimal experience with the product considered initially only one brand. This and other findings suggest that many people regularly observe advertising prior to their awareness of being in the market; and this prior effect can substantially limit their information search once they are aware of being in the market.

Consumers Use More Than One Source of Product Information

The research results support the contention that consumers use more than one type of information source before buying a consumer durable. Advertising was seldom the only source used. Furthermore, different media were found to serve different and complementary roles in the consumer's search for information. Thus, advertisers were not found to monopolize the distribution of consumer information; nor was there a media monopoly evident in the decision process for consumer durables.

The research program has also resulted in significant findings in the area of survey methodology. Because both aided and unaided recall questions were asked regarding the ranking of information sources as to their importance, it was possible to compare the two methods and to compare the unaided method with responses to several kinds of questions and to different ranking criteria. While advertising frequently has been found to rank low when unaided recall questions are used, the results of Dr. Newman's research indicate that responses to other kinds of questions support the idea that several types of information sources, including advertising, are widely used by consumers in their search for information. These findings suggest that one should consider carefully the type of question used and the ranking criteria before accepting the results of consumer judgments of information source influence.

The research has resulted in a number of journal articles and four doctoral dissertations. In addition, a new research design has been developed which will explore more fully consumer attitudes toward the process of buying and consumer satisfaction with available information sources. This new research effort, thus, by providing empirical evidence on the issue of latent consumer discontent, will help to fill an information vacuum in an area replete with unsubstantiated charges.

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BIBLIOGRAPHY

ARTICLES AND WORKING PAPERS

Kinnear, Thomas C. and James R. Taylor, "Socioeconomic and Personality Correlates of Ecologically Constructive Purchasing Behavior," in M. Venkatesan (ed.), Proceedings, 3rd Annual Conference, Association for Consumer Research, 1972, pp. 34-60.

Kinnear, Thomas C. and James R. Taylor, "The Effects of Ecological Concern on Brand Perceptions," Journal of Marketing Research, 10(May 1973), pp. 191-197.

Newman, Joseph W. and Richard Staelin, "Information Sources and Buyers of Consumer Durables," Journal of Advertising Research (forthcoming).

Newman, Joseph W. and Richard Staelin, "Multivariate Analysis of Differences in Buyer Decision Time," Journal of Marketing Research, 8(May 1971), pp. 192-198.

Bibliography (Cont'd)

Articles and Working Papers (Cont'd)

Newman, Joseph W. and Richard Staelin, "Prepurchase Information Seeking for New Cars and Major Household Appliances," Journal of Marketing Research, 9(August 1972), pp. 249-257.

Newman, Joseph W. and Richard A. Werbel, "Automobile Brand Loyalty" (forthcoming).

Newman, Joseph W. and Richard A. Werbel, "Multivariate Analysis of Brand Loyalty for Major Household Appliances" (forthcoming).

Newman, Joseph W. and Robert A. Westbrook, "Measuring Purchase Decision Time," Working Paper no. 68, Division of Research, Graduate School of Business Administration, University of Michigan.

DISSERTATIONS (University of Michigan)

Kinnear, Thomas Clifford, "The Ecological Dimension of Buyers' Purchase Decisions."

Staelin, Richard, "Information Seeking and Duration of the Purchase Decision Process for New Cars and Major Household Appliances."

Werbel, Richard A., "A Multivariate Analysis of Brand Loyalty for Purchasers of New Cars and Major Household Appliances."

Westbrook, Robert A., "Consumer Satisfaction in the Purchase Decision Experience for Major Household Appliances" (tentative title, dissertation research to be completed).

University: MICHIGAN STATE UNIVERSITY

Area of Research: MASS AND INTERPERSONAL COMMUNICATION OF CONSUMER INFORMATION AND GOALS AMONG THE URBAN POOR

Grantee: Dr. BRADLEY S. GREENBERG, Professor of Communication
College of Communication Arts
Michigan State University

Purpose

The purpose of this research grant was to acquire a better understanding of the communication behaviors of the urban poor. The low-income people who were studied included both blacks and whites, adults and children. Thus, the project was clearly intended to focus on the behavior of the urban poor, not restricting its findings to any racial or age category.

The early phase of the research was devoted to collecting and synthesizing existing information about the communication behaviors of urban, low-income people. After the compilation of an annotated bibliography and an extensive literature review, field studies were conducted in Cleveland, Philadelphia, and Lansing.

The primary research studies were designed to fill information gaps in the existing literature and to provide a contemporary insight into the use of mass and interpersonal communications channels, the nature of access to these channels, attitudes toward the mass media and toward other information sources, and mass media content preferences. Thus, while channel-bound factors in the communications process were given emphasis, the study of message content indicates that message-bound factors were also of interest. Audience-bound factors were studied to the extent that comparisons were made between responses of blacks and whites, and between responses of the urban poor and rural and suburban audiences.

The literature review efforts and primary research studies resulted in an impressive output of published and unpublished findings: two doctoral dissertations, several journal articles, fourteen project reports, and one book, entitled Use of the Mass Media by the Urban Poor.

Field Studies

The field study in Cleveland consisted of personal interviews with 360 black adults. In Michigan, 409 fourth and fifth grade children were interviewed. They consisted of white children in rural, suburban, and inner city environments, and black children in the inner city environment. The Philadelphia investigation explored the television attitudes and viewing habits of teenagers.

The results of the field studies and literature review revealed numerous aspects of mass and interpersonal communication behaviors of the urban poor that can be of value to the advertising practitioner in selecting media, times, and information sources most accessible to low-income population segments, as well as attitudes and motivations most common to them. A sample of these findings will be discussed below.

Television Exposure of Urban Poor

Low income families were exposed to more hours of television per day than are families in the general population. This was true for both adults and teenagers. Low-income urban blacks spent more time watching television than did low-income urban whites. Television watching, in fact, seems to be a major activity of the urban poor, taking more time than any other activity for many of them. While high television use may be considered "dysfunctional," it was found that high TV use was related to greater awareness of expert information sources. However, it was found that the highest level of knowledge of information sources occurred among those urban respondents who had the most diverse interpersonal contacts, who were able to make contacts with individuals outside of the ghetto social system.

Use of newspapers were also related to awareness of professional, institutional, and media sources of information. The interpersonal trait of "gregariousness" was another communication variable positively related to awareness of expert information sources.

TV Watching By Black Children vs. White Children

Significant differences were discovered between black and white children in their exposure to television and in their responses to questions about television. For example, while the black youngsters watched more programs overall (whether or not they featured black characters), they tended to prefer those featuring black characters. With regard to the urban, suburban, and rural categories, it was found that urban youngsters believed that television was more realistic than did the other groups; but the attitudes of white urban children toward blacks in general and, in particular, TV blacks were least positive.

In another study of the use of mass media among adults, it was found that, as expected, low-income adults were considerably different from the general population in their media attitudes and behavior; while low-income blacks and low-income whites were quite similar in their attitudes and behavior regarding the use of mass communications.

The research results, thus far, are vast; and they are also impelling in their implications for the advertiser and the maker of public policy. Dr. Greenberg and his colleagues are continuing to investigate this subject area. Two subjects of current interest to them relate to diffusion of consumer information among the urban poor and between the poor and the "outside" social system, and responses of the urban poor to specific types of persuasive messages. These research subjects also promise to be of interest to the advertising practitioner.

BIBLIOGRAPHY

BOOKS AND ARTICLES

Greenberg, Bradley S., "Mass Communication Behaviors of the Urban Poor," in Midura, E. (ed.), *Why Aren't We Getting Through?*, Washington, D.C., Acropolis Press, 1971, pp. 13-28.

Greenberg, Bradley S. and Brenda Dervin, *Use of the Mass Media by the Urban Poor* (with the assistance of Joseph R. Dominick and John Bowes), New York, Praeger Publishers, 1970.

Greenberg, Bradley S. and Brenda Dervin, "Mass Communication Among the Urban Poor," *Public Opinion Quarterly*, 34(Summer 1970), pp. 224-235.

Greenberg, Bradley S. and Brenda Dervin, "The Communication Environment of the Urban Poor," in Kline G. and P. Tichenor (eds.), *Current Perspectives in Mass Communication Research*, Sage Publications (forthcoming).

CUP RESEARCH REPORTS

Dervin, Brenda, "The Communication Behaviors of the American Urban Poor: A Summary of Research and Suggestions for Future Research" (September 1970).

Dervin, Brenda and Bradley S. Greenberg, with John Bowes, Margaret Curley and Gerhard Hanneman, "Communication and Urban Poverty: A Research Summary" (April 1969).

Dervin, Brenda, Bradley S. Greenberg and John Bowes, "Communication and Urban Poverty: An Annotated Bibliography" (April 1969).

Dominick, Joseph R. and Bradley S. Greenberg, "Three Seasons of Blacks on Television" (May 1970).

Greenberg, Bradley S., John Bowes and Brenda Dervin, "Communication and Related Behaviors of a Sample of Cleveland Black Adults" (September 1970).

Greenberg, Bradley S. and Brenda Dervin, "Communication and Related Behaviors of a Sample of Low-Income Urban Adults Compared with a General Population Sample" (November 1967).

Greenberg, Bradley S. and Brenda Dervin, "Communication and Related Behaviors of a Sample of Urban Adults in Three Low-Income Areas" (December 1967).

Greenberg, Bradley S. and Brenda Dervin, "Communication and Related Behaviors of Low-Income White and Negro Adults" (May 1968).

Greenberg, Bradley S. and Brenda Dervin, "Mass Communication Among the Urban Poor" (March 1969).

University: UNIVERSITY OF MINNESOTA

Area of Research: DECISION-MAKING IN MARKETING MANAGEMENT AND APPLICATION OF COGNITIVE THEORY TO MARKETING COMMUNICATIONS

Grantees:
Dr. ROBERT J. HOLLOWAY, Professor of Marketing
Dr. RICHARD N. CARDOZO, Associate Professor of Marketing
Dr. IVAN ROSS, Assistant Professor of Marketing
Graduate School of Business Administration
Center for Experimental Studies in Business
University of Minnesota

Nature of Research

The grant awarded to Professors Holloway, Cardozo and Ross was part of an extensive research program sponsored by the Center for Experimental Studies in Business. As such, it helped support numerous studies on decision-making in marketing management, with emphasis placed on the use of information in the decision-making process. In addition, the researchers investigated the topics of social responsibility and public policy in marketing, consumer behavior, and organizational purchasing. These investigations were designed to provide meaningful inputs to marketing management decisions. Thus, the research program not only dealt with how marketers use information, but it also provided new information for use by managers in their attempts to make effective decisions.

New Product Decisions

One area of decision given particular emphasis was the innovation and introduction of new products. In making new product decisions, both marketing managers and marketing researchers may make "go" or "no-go" decisions on the basis of information supplied by advertising agencies. Nevertheless, these two groups of decision-makers exhibit sharply different preferences for types of information. It appears that the far more expensive information emerging from test marketing programs is generally not used to make "go" or "no-go" decisions, but rather to confirm or to refine the decision already made on the basis of less costly data.

New Product "Predictors" vs. New Product Triers

Another study dealing with the kind of information used in new product decisions considered the characteristics of individuals who serve as respondents in product concept research. The idea here was to discover what type of individual can most accurately predict new product success. Often researchers monitor the responses of consumer groups called "heavy users" or "new-product triers" in order to predict the acceptance of a new product concept within a product category. However, it was found that consumers identified as "predictors," on the basis of their past predictive accuracy, were able to predict new product success twice as accurately as consumers identified as "heavy users" or "new-product triers." This finding suggests an efficient and more valid basis for evaluating the potential of new product concepts. Additional research into the demographic and personality characteristics of "predictors" may yield useful criteria for identifying them within a new product's potential market.

Advertising and Sampling

Another finding related to new product marketing indicated that for some individuals, advertising is the most effective type of promotion; and for others, new product sampling is most effective. This suggests that potential markets for new products may be segmented in terms of promotion-effectiveness criteria.

Race Prejudice and Integrated Advertising

A number of studies have implications for advertising in the areas of social responsibility and public policy. An experimental investigation of racial prejudice and integrated advertising indicated that more highly prejudiced whites react adversely to advertisements featuring non-whites; but less prejudiced whites respond the same way to integrated advertisements as they do to advertisements featuring only white principals. The ratings of both prejudiced and non-prejudiced respondents tended to carry over to products featured in the advertising as well as to the sponsoring companies. It appears, however, in light of the potential benefits of integrated advertising, that the adverse reactions observed in this study were not excessive.

Other studies suggest that consumers' responses to "deceptive" advertisements vary considerably; and indeed, their responses often differ from judgments made by public policy-makers. These findings have direct implications for advertising regulation in the public interest.

Effect of Self-Concept on Brand Preference

Another area of research hypothesized that the relationship between an individual's self-attitudes and his brand preference would vary as a function of the conspicuousness of the product category being studied. Contrary to prediction, it was found that a person's actual or "real" self-concept was more predictive of brand preference for both conspicuous and inconspicuous products than was his aspired or "ideal" self-concept. This finding has implications for the design of message strategy, particularly in cases where it may be assumed that some dissatisfaction with self motivates brand choice.

Effect of Industrial Advertising on Organizational Purchase Behavior

Studies in organizational purchasing behavior and industrial marketing supported the hypothesis that advertising is an important element in the industrial marketing process. Specifically, it was found that advertising

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can be particularly helpful to the little-known supplier as a means for improving his chances of making a sale. Furthermore, it appears that particular types of institutional advertisements are more effective in this role than are product advertisements.

These results and the results of other studies currently being pursued should be helpful to the marketer in the design of marketing strategies, particularly for new products. In addition, the techniques and research findings developed in this project constitute a basis for the development of useful teaching materials that can be employed in formal degree programs or in management development programs. The decision to emphasize the information needs of the marketing manager is effectively guiding current research efforts, by providing a vehicle for integrating and strengthening the individual research projects included in this program.

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BIBLIOGRAPHY

Cagley, James and Richard Cardozo, "Racial Prejudice and Integrated Advertising: an Experimental Study," in McDonald (ed.), Marketing Involvement in Society and the Economy, American Marketing Association 1969.

Cagley, James and Richard Cardozo, "Whites' Responses to Integrated Advertisements," Journal of Advertising Research, 10(April 1970), pp. 35-40.

Cardozo, Richard, "The Buying Game," Purchasing Management, 2(June 1972).

Cardozo, Richard N. and James W. Cagley, "The Buying Game: An Experimental Study of Industrial Purchasing Behavior," Journal of Marketing Research, 8(August 1971), pp. 329-334.

Cardozo, Richard N. and James W. Cagley, "How Students Play the Buying Game," Journal of Purchasing, 7(May 1971), pp. 64-78.

Cardozo, Richard and James Cagley, "An Experimental Study of Industrial Buyer Behavior," Journal of Marketing Research, 8(August 1971), pp. 329-334.

Cardozo, Richard, William Rudelius, Ivan Ross, "New Product Decisions by Marketing Executives: A Computer-Controlled Experiment," Journal of Marketing, 36(January 1972), pp. 10-16.

Feldman, Wallace and Richard Cardozo, "The 'Industrial Revolution' and Models of Buying Behavior," Journal of Purchasing, 5(November 1969), pp. 77-88.

Holloway, Robert J. "Bibliography on Marketing to Low-Income Consumers" (revised edition), U.S. Department of Commerce, Business and Defense Services Administration, U.S. Government Printing Office, 1971.

Holloway, Robert J. and Richard Cardozo, *Consumer Problems and Marketing Patterns in Low-Income Neighborhoods: An Exploratory Study*, University of Minnesota, 1969.

Lehman, Martin and Richard Cardozo, "'Institutional' vs. 'Product' Advertisements for the Industrial Advertiser," *Journal of Advertising Research* (forthcoming).

Peterson, Robert A., "The Price-Perceived Quality Relationship: Experimental Evidence," *Journal of Marketing Research*, 7(November 1970), pp. 525-528.

Peterson, Robert A. and William Rudelius, *Adoption of Marketing Innovations Among Competitors: The Life Insurance Industry*, College of Business Administration, University of Texas, November, 1970.

Peterson, Robert A., William Rudelius and Glenn Wood, "Spread of Marketing Innovations in a Service Industry," Journal of Business, 45(October 1972), pp. 485-496.

Ross, Ivan, "Self-Concept and Brand Preference," *Journal of Business*, 44(January 1971), pp. 38-50.

Ross, Ivan, "Structure of Information Seeking and Personality in Consumer Decision Making," *Journal of Business Administration*, 3(Spring 1972), pp. 55-67.

Ross, Ivan and Russell Belk, "An Investigation of the Nature of Word-of-Mouth Communication Across Adoption Categories for a Food Innovation," paper presented at the Association for Consumer Research, Silver Springs, Maryland, September, 1971.

Ross, Ivan and Robert A. Peterson, "Some Semantic and Demographic Considerations in Selecting New Brand Names," *Journal of Advertising Research* (forthcoming).

Rudelius, William, Robert F. Hoel and Roger A. Kerin, "Assessing Retail Opportunities in Low-Income Areas," Journal of Retailing, 48(Fall 1972), pp. 96-114.

Rudelius, William and Glenn Wood, "Life Insurance Product Innovations," *Journal of Risk and Insurance*, 37(June 1970), pp. 169-183.

Sauter, Richard and Orville Walker, "Retailers' Reactions to Interest Limitation Laws: Additional Evidence," *Journal of Marketing*, 36(April 1972), pp. 58-61.

Bibliography (Cont'd)

BEST COPY AVAILABLE

Walker, Orville, "The Effects of Learning and Bargaining Behavior in Asymmetric Groups," paper read at the National Educators' Conference of the American Marketing Association, Minneapolis, Minnesota, August, 1971.

Walker, Orville and Neil Ford, "Can 'Cooling-off Laws' Really Protect the Consumer?", Journal of Marketing, 34(April 1970), pp. 53-58.

Walker, Orville, G. Churchill and N. Ford, "Reactions to Role Conflict: The Case of the Industrial Salesman," Journal of Business Administration, 3(Spring 1972), pp. 25-36.

University: UNIVERSITY OF MISSOURI

Area of Research: SUBJECTIVE APPROACH TO ADVERTISING

Grantee: Dr. WILLIAM STEPHENSON, Distinguished Research Professor
School of Journalism
University of Missouri

Purpose of Research:

Rather than considering "facts" about advertising response, such as amount of information recalled, Dr. Stephenson and his colleagues argue that in many instances, a consideration of value-laden "opinions," that is to say subjective responses, is a more useful basis for many advertising decisions. Examples of subjective responses include perception of product image; extent of consumer identification with products or brands, and the nature of that identification; and attitudes toward products or brands, or toward statements about products or brands. Dr. Stephenson suggests that all areas of decision relevant to advertising message selection and design can be aided by subjective analysis of the product as well as subjective analysis of potential product appeals. Thus, a major emphasis in the research sponsored by this grant is the investigation of the usefulness of the subjective approach to the study of advertising.

Methodology

A second, and equally important, emphasis is the extension to an advertising context of a research methodology specifically designed to study subjective responses. Known as Q-Methodology, this research approach considers subjective, self-related responses to be of central importance, and relies on intensive analysis of individuals and not on mass population situations in order to monitor subjective responses. In practice, the application of the Q-Technique requires the individual to sort objects, often cards with statements printed on them, into evaluative categories along an eleven-point scale.

The judgment dimension may reflect positive or negative attitude, a range of self-identification, or degree of agreement or disagreement with the objects being judged. For example, the individual may be asked to place statement cards in the eleven categories, where the first category represents complete agreement with the statement and the eleventh represents complete disagreement. Usually, the individual is instructed to categorize in such a way that his judgments are distributed in a "quasi-normal" manner along the judgment scale, with most items in the middle category and fewer items in each category as the extremes are approached. Instructions specify the exact number of items to be placed in each category. These distribution requirements are intended to satisfy certain statistical assumptions in some forms of data analysis.

After the sorting procedure is carried out, individuals can be grouped according to the similarity of their responses. This grouping is achieved by use of factor-analytic statistical procedures. Factor analysis can be used to determine what "groups" exist for a product or service or an advertising message. The object here is not to measure relative group size, but to segment on a subjective basis of what people value.

Application

The subjective approach to advertising thus enables agencies and advertisers to test promotion theories and creative strategies. Knowing how a person does or does not identify with a particular product or service can also be useful in developing and testing new product concepts. In his new book entitled Rationale for a Subjective Approach to Advertising, Dr. Stephenson asserts that his new and innovative theories will eventually lead to substantial changes in how advertising will be studied by theorists and how it will be regarded by the general public. For example, the advertiser, according to Dr. Stephenson, can avoid or overcome his image as a "hidden persuader" by focusing on the self-involving aspects of his product and message.

Additional research on the subjective approach to advertising includes five Ph.D. dissertations and four M.A. theses, all supported by funds provided by the A.A.A.A. Educational Foundation.

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BIBLIOGRAPHY

DISSERTATIONS AND THESES (University of Missouri)

Branham, Frank Leigh, Jr., "Alcoholic Beverage Advertising: The Subjective Dimensions of Consumership" (Master's thesis).

Goodall, George Brian, "A Subjective Approach to Consumership" (Master's thesis).

Karmatz, Franklin N., "A Q-Methodological Study of Pre-Journalism Students' Attitudes Toward Business--Two Modes."

Levy, D., "A Subjective Approach to Advertising Theories."

Mauldin, C. R., "A Subjective Systems Approach: Application of an Image Study to Aggregate Behavior in a Socio-economic System."

McCarty, Ricky H., "Packaging and Advertising of Men's Toiletries: An Intensive Study of a Pure Type" (Master's thesis).

Olins, Robert Abbot, "A Model Study of an Advertising Campaign."

O'Shea, Lynne Edeen, "A Q-Methodological Approach to the Use of Advertising in Politics" (Master's thesis).

Schreiber, Richard A., "A Subjective Investigation of Motorcycle Advertising."

University: NORTHWESTERN UNIVERSITY

Area of Research: SOCIAL MARKETING

Grantees: Dr. PHILIP KOTLER, A. Montgomery Ward Professor of Marketing
Dr. GERALD ZALTMAN, Associate Professor of Behavioral Science
Graduate School of Management
Northwestern University

Purpose of Research

The overall purpose of this project is to investigate the application of advertising and marketing expertise for the achievement of socially responsible goals. Efforts, such as defensive driving campaigns, family planning education campaigns, educational campaigns to improve nutrition practices among housewives, and promotion for political candidates may all be considered to fall into the realm of social marketing. As is often the case with respect to business marketing, the most salient aspect of many social marketing efforts is the advertising campaign. It should be noted, however, that social marketing is not limited to the study of social advertising campaigns; and in fact, one encounters areas of decision in social marketing analogous to each decision area for the product marketing mix. This complexity is evident in the marketing organizations of the larger social change agencies. The marketing of an idea, in many instances, requires the application of sophisticated business marketing principles.

The question remains, however, of whether knowledge derived from the study of product marketing can be transferred and applied directly to social marketing problems. Can information about how advertising changes attitudes toward a brand, for example, be confidently used when the "product" is a person or an idea? In what ways are business and social marketing similar? Such questions can be answered by studying the social marketing process and monitoring social marketing effects. This was the central research goal of the grant to Dr. Kotler and Dr. Zaltman.

Nature of Research

The individual studies funded by this grant took several forms. Some studies pursued basic research into the nature of the social marketing process; while additional research involved the study of specific communications and marketing strategies and their interaction with individual characteristics. A large field study designed to survey social marketing effects in Costa Rica was performed, with the goal to empirically testing a social marketing model developed by Zaltman and Vertinsky. Finally, funds were applied to the effort to disseminate the social marketing concept to interested marketers and social change agents. This dissemination took the form of papers and articles presented at professional association conferences, and published in professional journals.

Advertising As a Source of Nutrition Information

The Social Marketing Project sponsored by the A.A.A.A. has directly supported five doctoral dissertations. Three graduate students have been supported in other investigations, all of which concern the use of marketing techniques in a constructive way to solve social problems. One of these dealt with the role of mass media advertising as a source of nutrition-related information. This project has received international attention among nutritionists as illustrating the beneficial application of advertising to an area of social concern. In addition, a dissertation in this area of communication and nutrition utilizes a multi-disciplinary conceptual framework to identify socio-psychological factors and communication behaviors of mothers, with children at home, which can explain significant differences in their nutritional behavior. The following data were gathered as a basis for determining the important influences on nutrition behavior: attitudes toward foods, health, and new products; life values; nutritional knowledge; areas of interest and improvement activities; role behavior as wife, mother, and woman; and adequacy of diet.

Effectiveness of Defensive Driving Ad Appeals

Another interesting area of dissertation inquiry was the effectiveness of alternative advertising appeals in defensive driving programs. Two dissertations in this area received the full support and cooperation of the National Safety Council, which contributed matching funds and technical and clerical assistance. One of the dissertations concentrated on a complex model of the decision process leading up to behavioral responses related to a defensive driving course. This study traces the influence of personality characteristics and the individual's beliefs and attitudes in this decision process. The second dissertation in the area of defensive driving tests not an individual decision model but, instead, concentrates on and partially tests a marketing decision model, linking marketing strategies with marketing mix instruments available to the social marketer. Tests of the model took the form of a field experiment and a comparative study.

Usefulness of Research

One of the underlying premises of the research covered by this grant is that advertising and marketing are neutral instruments and, as such, should not be subjected to value-laden criticism. In an era when advertising and marketing have been put on the defensive in the commercial area, and are indeed being criticized as fostering detrimental values, it seems important to stress the application of these instruments for social benefits. The investigations in this research program illustrate such applications and evaluate the power of advertising as an instrument of social change.

BIBLIOGRAPHY

ARTICLES AND PAPERS

Kotler, Philip, "The Elements of Social Action," in Gerald Zaltman, Philip Kotler, and Ira Kaufman (eds), Creating Social Change, Holt, Rinehart, and Winston, 1972.

Kotler, Philip and Gerald Zaltman, "Social Marketing: An Approach to Planned Social Change," Journal of Marketing, 35(July 1971), pp. 3-12.

Zaltman, Gerald, Reinhard Angelmar, and Christian Pinson, "Metatheory in Consumer Behavior Research," working paper #81-71, Graduate School of Management, Northwestern University.

Zaltman, Gerald and Ilan Vertinsky, "Health Marketing: A Suggested Model," Journal of Marketing 35(July 1971) pp. 19-27.

DISSERTATIONS (Northwestern University)

Brooker, George, "The Self-Actualizing Consumer: A Personality Test to Identify Consumer Targets for Social Products."

Cullwick, David, "A Consumer Health Behavior Paradigm for Dietary Nutrition Improvement."

Kaufman, Ira, "A Microbehavioral Model of Social Marketing: A Field Test of Selected Psychosocial Variables in the Adoption of an Adult Education Course."

Roberto, Eduardo, "An Investigation of the Problem of Advertising Theme Research with Specific Application to the Social Marketing of Vasectomy Series."

Shama, Avraham, "Candidate Image and Voter Preference: A Theory and Experiment."

Stiff, Ronald, "Reforms as Products: A Marketing Management System Model for an Adult Education Course in Driver Improvement."

University: OHIO STATE UNIVERSITY

Area of Research: EVALUATION OF PHYSIOLOGICAL MEASURES IN ADVERTISING RESEARCH

Grantee: Dr. ROGER D. BLACKWELL, Associate Professor of Marketing
College of Administrative Science
Ohio State University

Nature of Research

Professor Blackwell's research program was designed to study the current use and potential value of physiological measuring equipment in advertising research. This effort involved an extensive review of the published psychological and marketing literature on the subject, as well as a mail survey of 668 respondents in marketing research firms, advertising agencies, and the research departments of the 500 largest corporations. The focus of this secondary and survey phase of the research program was to determine how much is currently known about the sensitivity, validity, and reliability of various types of physiological equipment; the absolute and relative incidence of use of this equipment; and the research topics most often studied with it.

On the basis of the information gleaned from the literature and the surveys, the researchers chose two types of physiological measures to subject to validity and reliability testing in a laboratory context. The physiological response measures chosen were the galvanic skin response (GSR), and the pupil dilation response (PDR). In this laboratory experimental series, housewives served as the respondents.

Methodology

Before discussing specific results of the laboratory experiments, it is important to consider some of the findings from the survey research as well as some of the methodological issues surrounding the use of physiological measuring devices. The survey found usage of physiological equipment to be at a significant level; and the most frequently studied marketing problem, using physiological equipment, was advertising pretesting. On the basis of the survey findings, the researchers decided to concentrate on the measurement of visual perception in the subsequent laboratory experiments.

Problems Encountered in Physiological Measurement

The literature review revealed that while most physiological measures appear to be sensitive to changes in stimulus strength, it is not always easy to identify in an unambiguous way the stimulus that is causing the change. For example, eye pupil dilation may be a response to changes in light intensity, or it may be a function of the content of a visual stimulus. Thus, in order to determine the effects of visual content on pupil dilation, it is necessary to control the light intensity in such a way that it is eliminated as a possible cause of the effects observed. Even if the stimulus is well defined, however, the meaning of a physiological response is not always clear. For example, a pupil dilation response to stimulus content might be interpreted as a measure of attention, attraction, fear, or some other mental state. Without empirical validity testing, it would be impossible to know the meaning of such a response. This illustrates one of the problems as well as one of the challenges in physiological measurement. Certainly, empirical validity testing is a necessary condition for the confident use of physiological measures in advertising research.

Another problem and challenge that arises in the use of physiological equipment is that of generalizability of laboratory findings to a larger "real world" context. Can we be confident that results in the laboratory are reproducible in the market? Dr. Blackwell and his colleagues acknowledged that all laboratory procedures involve some risks in this respect; but in a marketing context, they are generally less expensive than field studies and provide experimental control over the stimulus variables not possible in the field. Ideally, the laboratory situation should effectively simulate the real environment; and the experimental insights acquired in the laboratory context might also be tested in the field.

Results

Turning now to specific results of the laboratory studies funded by this grant, it was found that the galvanic skin response (GSR) varies as a function of the information received by the respondent. This conclusion was reached after comparing GSR responses with responses to a number of non-physiological measures. Similarly, the pupil dilation response (PDR) was found to monitor the amount of "load process" by the central nervous system. Both the GSR and PDR can, thus, be considered measures of attention associated with memory or recall. Current studies are now being pursued with respect to the relationship between attitude and physiological responses.

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BIBLIOGRAPHY

Blackwell, Roger D., James F. Engel, and David T. Kollat, "Boni, Vinson and Bailey: Measuring Response to Advertising," in Cases in Consumer Behavior, Holt, Rinehart, and Winston, 1969.

Blackwell, Roger D., James S. Hensel, Michael B. Phillips, and Brian Sternthal, Laboratory Equipment for Marketing Research, Kendall/Hunt Publishing Company, 1970.

Blackwell, Roger D., James S. Hensel, and Brian Sternthal, "Pupil Dilation: What Does It Measure?" Journal of Advertising Research, 10(August 1970), pp. 15-18.

Bibliography (Cont'd)

DISSERTATIONS

Hensel, James S., "Physiological Measures of Advertising Effectiveness: A Theoretical and Empirical Investigation," unpublished doctoral dissertation, Ohio State University.

Sternthal, Brian, "Persuasion and the Mass Communication Process," unpublished doctoral dissertation, Ohio State University.

University: UNIVERSITY OF PENNSYLVANIA

Area of Research: MARKETING RESEARCH APPLICATIONS OF
MULTIDIMENSIONAL SCALING

Grantee: Dr. PAUL E. GREEN, S. S. Kresge Professor of Marketing
Wharton School of Finance and Commerce
University of Pennsylvania

Premise of Research

It is not surprising that marketers should be interested in the internal mental processes of perception and attitude formation, for these processes are intimately related to the buying decision. In fact, any advertising campaign that involves goals of image or opinion change necessitates some theory, however informal, of perception and attitude. In a competitive environment, the advertiser must be concerned with the perception of his product in the context of alternative choices; and he must also be concerned with the concepts of relative favorability of attitude or brand preference. Product changes often are made for the purpose of more satisfactorily satisfying consumer needs and wants, by bringing the brand closer to the consumer's perception of some hypothetical "ideal" brand. In the absence of product changes, market segmentation strategies can be employed in order to reach those individuals whose "ideal" brand perceptions and preferences most closely match the attributes of the existing product offering.

One can readily see that any research methodology that results in accurate description of perceptual or preference structure is potentially beneficial to the marketer in his strategic planning. For example, segment-specific promotional appeals could be designed to reach groups of individuals with similar perceptual or preference structures, if the nature of such structures were known.

The research funded by this grant was designed to investigate new techniques developed from mathematical psychology. These enable the marketing researcher to determine how people perceive and evaluate product offerings and how their perceptions and evaluations compare with those of other people in the marketplace. Called multidimensional scaling, these techniques result in descriptions of perceptual and evaluative structure as points in a multidimensional space.

Applying The Spatial Analogy To Perception

Implicit in the language of perception and preference are spatial concepts. Certain product attributes, for instance, are often referred to as the "dimensions" with respect to which a brand is judged or evaluated; and relative judgment of products implies an underlying "reference scale" on which products are "positioned." It is natural to extend such analogies to include the concept of a perceptual or preference "space" where products or individuals can be positioned as "points." A further extension of the analogy suggests that similarly perceived products should occupy similar positions in the perceptual space, as should individuals with similar perceptions. Thus, the concept of "distance" between points in the space is introduced, with greater distance representing greater dissimilarity of judgment of evaluation. While spatial analogies are not new, the techniques of multidimensional scaling enable the researcher to construct metric perceptual spaces using nonmetric data, such as pairwise comparisons and rankings of preference. This represents a methodological innovation that has not yet been fully explored. The research sponsored by this grant was, thus, designed to examine the potential applications as well as the limitations of multidimensional scaling techniques in a marketing context.

Possible Areas of Application

One study developed and partially tested an approach to market segmentation where the segmentation criteria were individual patterns of perception and preference. In this approach to market segmentation, individuals can be divided into homogeneous groupings on the basis of their similarity of perceptions. Each perceptual grouping, then, can be further segmented in terms of preference data, indicating position in the perceptual space of "ideal" product choices. Segments so defined can serve as bases for several types of corporate strategy, including promotion aimed at "moving" a brand to a favored region of the perceptual space or changing individuals' "ideal" points to regions of the space closer to the marketer's brand. Prediction of success with such strategies awaits more knowledge on the relationship between "ideal" point positions and sales probabilities; and implementation of such strategies would require that perceptual segments be related in meaningful ways to the traditional socio-economic and demographic variables which serve as bases for media selection.

Self-Concept and Brand Preference

A second area of application deals with self-concept and brand preference. The self-concept, one's perception of his own individual characteristics, is a central notion in psychology; and it has served as the basis for prediction of brand preference in consumer behavior studies. Generally, it is hypothesized that individuals will prefer brands that are viewed as consistent with the self-concept. This involves a matching of product attitudes, or "images," and self attitudes. For example, if an individual considers himself to be an aggressive person, he might purchase an automobile that has an aggressive image.

The application of multidimensional scaling to perception and evaluation of automobiles and self indicates, however, that the relationship between product and self images is much more complex than the consistency hypothesis would suggest. In a pilot study, it was found, in fact, that some subjects' automobile preference ranks were negatively related to distance of the brand from the self-concept in the perceptual space. One possible explanation for this finding is that some individuals prefer cars that are consistent with some aspired or ideal self-concept. Further studies are required to clarify this issue, which has obvious implications for communication and promotion strategy.

Perception and Evaluation of Ads By Agency People

A third area of inquiry that lends itself to multidimensional scaling analysis is the perception and evaluation of advertising messages by advertising agency personnel. One interesting pilot study in this area found that there were moderate group differences in perception and evaluation of print advertisements between a small sample of advertising professionals versus a sample of non-experts. The perceptual structure of "good" advertisements that had produced a high level of coupon returns were compared with perception and evaluation of a set of "bad" advertisements. The researchers found little predictive ability on the part of either group to separate the "good" from the "bad" ads. Results, of course, should be interpreted with caution because of the small sample size.

The research program supervised by Dr. Green has not only enlarged the scope of application of multidimensional scaling techniques, but it has also added substantively to the theory of multidimensional scaling methods. Basic methodological studies such as these contribute significantly to the technology of marketing research, and illustrate the interdependence of the academic and applied marketing disciplines.

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BIBLIOGRAPHY

ARTICLES AND WORKING PAPERS

Frank, Ronald E. and Paul E. Green, "Numerical Taxonomy in Marketing Analysis: A Review Article," Journal of Marketing Rsearch, 5(February 1968), pp. 83-94.

Green, Paul E., "A Note on the Analysis of Alternative Multidimensional Scaling Methods Under Conditions Involving Individual Differences in Dissimilarities Judgments," working paper, November 1969.

Green, Paul E., "Nonmetric Methods in Multivariate Analysis," in Fisk, George (ed.), Essays in Marketing Theory (forthcoming).

Green, Paul E., "Ordinal Methods in Multidimensional Scaling," in Ferber, Robert (ed.), Handbook of Marketing Research, AMA project.

Green, Paul E. and Frank J. Carmone, "Advertisement Perception and Evaluation: An Application of Multidimensional Scaling," Journal of Advertising Research (forthcoming).

Green, Paul E. and Frank J. Carmone, "Marketing Research Applications of Nonmetric Scaling Methods," in Shepard, R. N. (ed.), Proceedings, of the First Symposium on Nonmetric Multidimensional Scaling, University of California, Irvine (forthcoming).

Bibliography (Cont'd)

Articles and Working Papers (Cont'd)

Green, Paul E. and Frank J. Carmone, "Multidimensional Scaling: An Introduction and Comparison of Nonmetric Unfolding Techniques," Journal of Marketing Research, 6(August 1969), pp. 330-341.

Green, Paul E. and Frank J. Carmone, Multidimensional Scaling and Related Techniques in Marketing (monograph), Allyn and Bacon (forthcoming).

Green, Paul E. and Frank J. Carmone, "Stimulus Context and Task Effects on Individuals' Similarities Judgments," working paper, January 1970.

Green, Paul E. and Frank J. Carmone, "The Performance Structure of the Computer Market: A Multivariate Approach," Economics and Business Bulletin, 21(1968), pp. 1-11.

Green, Paul E., Frank J. Carmone and Leo Fox, "Television Program Similarities: An Application of Subjective Clustering," Journal of the Market Research Society, 11(1969), pp. 70-90.

Green, Paul E., Frank J. Carmone and P. J. Robinson, "Nonmetric Scaling Methods: An Exposition and Overview," Wharton Quarterly, 2(Spring 1968), pp. 27-41.

Green, Paul E. and Arun Maheshwari, "Common Stock Perception and Preference: An Application of Multidimensional Scaling," Journal of Business, 42(October 1969), pp. 439-457.

Green, Paul E., Arun Maheshwari and Vithala R. Rao, "Self-Concept and Brand Preference: An Empirical Application of Multidimensional Scaling," Journal of the Market Research Society, 11(October 1969), pp. 343-360.

Green, Paul E. and Thomas W. Morris, "Individual Differences Models in Multidimensional Scaling: An Empirical Comparison," Proceedings of the Ohio State Conference on Consumer Behavior (forthcoming).

Green, Paul E. and Vithala R. Rao, "A Note on Proximities Measurements and Cluster Analysis," Journal of Marketing Research, 6(August 1969), pp. 359-364.

Green, Paul E. and Vithala R. Rao, "Configuration Invariance in Nonmetric Scaling," Proceedings of the Cincinnati Educators Meeting of the American Marketing Association, August 1969.

Green, Paul E. and Vithala R. Rao, "Nonmetric Approaches to Multivariate Analysis in Marketing," paper presented at AMA Workshop on Multivariate Statistics, Chicago, January 1970.

Bibliography (Cont'd)

Articles and Working Papers (Cont'd)

Green, Paul E. and Vithala R. Rao, "Rating Scales and Information Recovery--How Many Scales and Response Categories to Use?" working paper, January 1970.

Green, Paul E., Vithala R. Rao and Arun Maheshwari, "Dimensional Interpretation and Configuration Invariance in Multidimensional Scaling," Multivariate Behavioral Research, 6(April 1969), pp. 159-180.

Hinkle, C., P. J. Robinson and Paul E. Green, "Cluster Analysis in Industrial Marketing," Journal of Purchasing, 5(August 1969), pp. 49-58.

DISSERTATIONS (University of Pennsylvania)

Maheshwari, Arun, "Self-Concept Theory and Brand Choice, as Portrayed by Mutlidimensional Scaling Procedures."

Rao, Vithala R., "An Examination of the Price-Quality Hypothesis Using Multidimensional Scaling Techniques."

Schmidt, Edward, "Retail Store Images in Ghetto Marketing Areas" (to be completed).

University: UNIVERSITY OF PITTSBURGH

Area of Research: METHODOLOGICAL SIMULATION IN MARKETING AND ADVERTISING

Grantee: Dr. WILLIAM R. KING, Professor of Business Administration
Graduate School of Business Administration
University of Pittsburgh

Use of Computer Simulation Methods in Marketing & Advertising

The marketing analyst is increasingly employing computer simulation methods for the purpose of selecting alternative marketing and advertising strategies. A computer simulation of a marketing process requires that the relationships among the marketing variables be specified. That is, it requires a model - an abstract conceptualization of a real problem - indicating how marketing-decision variables and marketing-effects variables are related to each other. The simulation also requires that the analyst or decision-maker provide estimates of the values of input variables. The outcome, or effects estimate, of such a process can serve as a basis for a marketing decision. This outcome may take the form of an estimate of some optimal marketing strategy, or an estimate of the effect of a particular marketing effort.

Simulations of the advertising process, for example, may specify a relationship between level of advertising expenditure and sales. The decision maker, by varying expenditure level as an input, can monitor the estimated effects of those variations on changes in the sales level; and in so doing, he can approach an optimal level of advertising expenditure, such that incremental costs just equal incremental benefits. One can readily see that the determination of a truly optimal level of expenditure depends on the validity of the underlying process model of advertising effect. It also depends on the accuracy of the input variable values.

Deciding Which Model To Use

The underlying assumption made by the marketing analyst in using computer simulations for reaching strategic decisions is that formalized decision-making techniques result in better, or more optimal, decisions than less formalized methods. As a result of this interest in formalized decision-making, many models of varying complexity have been developed that deal with the same problem area. With this development, Dr. King notes, the analyst is faced with a "higher" level of decision-making: he must decide which one, of the many available models, to use before he can formalize the decision-making process with respect to a particular marketing problem. Since the analyst is an advocate of formalized decision-making, it is natural that he view the model-selection process in a formalized context. Until Dr. King's work, however, little effort had been expended in the application of formal problem-solving techniques to the problem of model-selection.

Rather, the selection of a model by a marketing analyst has traditionally been done on the basis of convenience, availability of input data, and individual skills and knowledge. These are certainly not criteria that would insure that the best possible model had been selected for the particular needs of the marketing manager. Consider, for example, the problem of data availability. It is obvious that increased data requirements increase the costs associated with model use; and the more complex models generally require more data input. To the extent that the complexity of the model is positively associated with its predictive accuracy, the more expensive models result in better prediction. One can easily visualize a trade-off situation arising in which the analyst must balance the accuracy of results against the expense of application. This observation gives a clue to the complexity of the analyst's decision as to which model to employ.

Other Factors Affecting Model Choice

Dr. King notes that other factors may enter into the analyst's decision. For example, characteristics related to the analyst's unique background, experience, education, and other innate characteristics may exert an influence on the way he attempts to solve formal marketing and advertising problems. These characteristics, Dr. King asserts, are measurable; and furthermore, the effects of such characteristics on the analyst's decision-making can also be measured. These primary hypotheses served as the bases for the research funded by this grant.

Computer simulation analysis is being employed to investigate the effects of analyst characteristics on the selection of formal marketing models. These characteristics are used to specify different "analyst-types." The model-selection behavior of the different types of analysts are then compared. Current research work involves the inclusion of cultural and national characteristics in the criteria used to specify analyst-types. With such specification, the model-selection behavior of analysts from different nations and cultures can be compared.

* * *

BIBLIOGRAPHY

ARTICLES

King, William R., "Methodological Simulation in Marketing," Journal of Marketing, 34(April 1970), pp. 8-13.

King, William R., "Methodological Systems Simulation," Proceedings of the 4th Pittsburgh Conference on Modeling and Simulation, April 1973.

University: PURDUE UNIVERSITY

Area of Research: CONSUMER CHOICE BEHAVIOR

Grantee: Dr. FRANK M. BASS, Professor of Industrial Administration
Herman C. Krannert Graduate School of Industrial Administration
Purdue University

Nature of Research

The relationship between consumer beliefs and consumer preferences or choices was the topic of investigation in the series of studies funded by this grant. The preferences or choices that were studied included those toward specific brands as well as choices of media vehicles. The theoretical basis for all the studies in this series was the attitude theory associated with the psychologists, Martin Fishbein and Milton Rosenberg. Both of these theorists stressed the role played by an individual's beliefs about an object in determining his attitude toward that object. The nature and strength of this theoretical relationship between beliefs and preference were explored.

Strength of Belief Influences Choice

The belief statements chosen for study were designed to link the object of choice--a brand or media vehicle--with specific object attributes. Preference or choice was viewed as dependent upon both the strength of belief and the perceived importance or evaluation of the linked object attributes. Strength of belief was defined in terms of the individual's estimation of the likelihood that the object in fact possesses a given attribute. For example, a brand of toothpaste may be linked with a number of specific attributes including a teeth whitening property, a decay prevention property, and an attribute related to taste. The individual's attitude toward the toothpaste and preference for the toothpaste is theoretically dependent upon the strength of his beliefs that the toothpaste brand indeed possesses such properties.

Attitude and preference also depend upon the individual's evaluation of the importance of each of the associated attributes. While this theory constitutes the basis for the investigations funded by this grant, it should be noted that no a priori assumptions were made concerning the exact manner in which beliefs about an object would be related to preference or choice; and similarly, no assumptions were made concerning the strength of such relationships. Thus, the studies were truly exploratory in nature, seeking to test the assumptions of attitude theorists and to determine the power of predictive models of preference and choice.

Methodology

The first phase of experimentation can be thought of as structural in its orientation. That is to say, it dealt with the structure of attitude and the relationship between belief structure and choice behavior. A second phase of experimentation, on the other hand, dealt with the ability of advertising for a brand and experience with the brand to change beliefs, attitudes, and preference for the brand. Thus, the second phase may be considered dynamic in its emphasis, stressing attitude change and the power of advertising and experience as change agents. During the course of these investigations, both laboratory and survey techniques were employed as a means for gathering appropriate data to test the structure and dynamics of the hypothesized relationships.

Considering now specific findings resulting from the first phase of experimentation, it should be noted that the basic research data in this phase consisted of measurements of relative attribute importance, measures of perceived attribute possession, and statements of relative preference or choice. Such data were gathered for a number of specific brands within a product category, and for a number of specific media vehicles. In addition, consumers were also asked to supply data with respect to an "ideal" brand or media vehicle. Theoretically, the most preferred "real" choice would be the one most similar to the "ideal," with respect to its possession of important product or media attributes. Brand preferences and attitudes were measured for five product categories in one study: frozen orange juice, mouthwash, toothpaste, lipstick, and brassieres. The preference model has also been applied to the selection of television shows by viewers. Additional studies have been performed, one of which applies the theoretical concepts of attitude, brand preference, and choice to the soft drink product category.

Results of First Phase

Overall results indicate that attitude measurements based on specific object attributes do predict preferences very well. If the attitude model predicts that a brand or a media vehicle is the first choice of the individual, it will actually be ranked by him as first or second choice with a very high probability, reaching 90% with respect to some product categories. Thus, the hypothesis that object preference or choice can be predicted from knowledge of the individual's beliefs concerning specific product attributes was strongly supported. Such predictions, however, will always be probabilistic; because it was found that choice behavior is not always constant even if attitudes are unchanging. For example, stated preference for soft drink brands may not change; but a consumer may drink a variety of brands. Thus, prediction of his choice on the basis of his preference cannot, even in theory, be completely accurate.

Results of Second Phase

The second phase of experimentation explores the relationship between advertising exposure and product experience on beliefs, and on changes in attitude and choice behavior. The results indicate that changes in beliefs

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concerning specific product attributes can be related to these two types of stimuli. Furthermore, the research conclusions suggest that it pays to advertise specific properties of brands in order to influence effectively consumer choice. Knowledge of underlying belief and attitude structure provides the advertising strategist with clues concerning the most important specific attributes and thus, the attributes most subject to effective change. Information concerning beliefs and attributes of "ideal" brands can be of aid in formulating advertising strategy, as criteria for market segmentation, and as a basis for planning changes in product design.

Four doctoral dissertations, and numerous journal articles and working papers resulted from this grant.

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BIBLIOGRAPHY

ARTICLES

Bass, Frank M., Edgar A. Pessemier, and Donald R. Lehmann, "An Experimental Study of Relationships Between Attitudes, Brand Preference, and Choice," Behavioral Science, 17(November 1972), pp. 532-541.

Bass, Frank M. and W. Wayne Talarzyk, "Using Attitude to Predict Individual Brand Preference," in Auer, Emma and Elizabeth Danner (sp. eds.), Occasional Papers in Advertising, published by American Academy of Advertising, May 1971.

Bass, Frank M. and W. Wayne Talarzyk, "A Study of Attitude Theory and Brand Preference," Journal of Marketing Research, 9(February 1971). pp. 93-96.

Bass, Frank M. and William L. Wilkie, "A Comparative Analysis of Attitudinal Predictions of Brand Preference," Journal of Marketing Research, 10(August 1973), pp. 262-269.

Beckwith, Neil E. and Donald R. Lehmann, "The Importance of Differential Weights in Multiple Attribute Models of Consumer Attitude," Journal of Marketing Research, 10(May 1973), pp. 141-145.

Ginter, James L., "An Experimental Investigation of Attitude Change and Choice of a New Brand," Journal of Marketing Research (forthcoming).

Ginter, James L. and Frank M. Bass, "An Experimental Study of Attitude Change, Advertising and Usage in New Product Introduction," Journal of Advertising, 1(1972), pp. 33-39.

Lehmann, Donald R., "Judged Similarity and Brand-Switching Data as Similarity Measures," Journal of Marketing Research, 9(August 1972), pp. 331-334.

Bibliography (Cont'd)

Articles (Cont'd)

Lehmann, Donald R., "Television Show Preference: Application of a Choice Model," Journal of Marketing Research, 8(February 1971), pp. 47-55.

Sheth, Jagdish N. and W. Wayne Talarzyk, "Perceived Instrumentality and Value Importance as Determinants of Attitudes," Journal of Marketing Research, 9(February 1972), pp. 6-9.

Winter, Frederick W., "A Laboratory Experiment of Individual Attitude Response to Advertising Exposure," Journal of Marketing Research, 10(May 1973), pp. 130-140.

INSTITUTE PAPERS (Krannert Graduate School of Industrial Administration, Purdue University)

Bass, Frank M. and James L. Ginter, "An Experimental Study of Attitude Change, Advertising and Usage in New Product Introduction," Institute paper no. 358.

Bass, Frank M., Edgar A. Pessemier and Donald R. Lehmann, "An Experimental Study of the Relationships Between Attitudes, Brand Preference, and Choice," Institute paper no. 307.

Bass, Frank M. and W. Wayne Talarzyk, "Using Attitude to Predict Individual Brand Preference," Institute paper no. 371.

Bass, Frank M. and W. Wayne Talarzyk, "A Study of Attitude Theory and Brand Preference," Institute paper no. 329.

Bass, Frank M. and William L. Wilkie, "A Comparative Analysis of Attitudinal Predictions of Brand Preference," Institute paper no. 398.

DISSERTATIONS (Purdue University)

Ginter, James L., "A Study of Attitude Change and Choice Behavior During New Product Introduction in a Laboratory Setting."

Lehmann, Donald R., "Choice Among Similar Alternatives: An Application of a Model of Individual Preference to the Selection of Television Shows by Viewers."

Talarzyk, W. Wayne, "An Empirical Study of an Attitude Model for the Prediction of Individual Brand Preference for Consumer Products."

Winter, Frederick W., Jr., "A Laboratory Experimental Study of the Dynamics of Attitude Change and Choice Behavior."

University: UNIVERSITY OF SOUTHERN CALIFORNIA

Area of Research: MINORITY RACIAL PERCEPTIONS AND VIEWPOINTS ABOUT ADVERTISING

Grantee: Dr. TAYLOR W. MELOAN, Professor & Chairman
Department of Marketing & Business Communications
Graduate School of Business Administration
University of Southern California

Purpose of Research

This grant was designed to investigate advertising directed toward or involving Afro-Americans and Mexican Americans. As such, it considered the audience-bound factor of race, or national origin, and the influence that this factor exerts in affecting response to advertising in general. It also considered the effects of advertising messages specifically designed to appeal to different racial groups. Thus, message-bound factors were also of interest in this investigation. Respondents in surveys and personal interviews were asked to supply information concerning general attitudes toward advertising, perception of specific types of advertising, and their own expectations regarding their economic future. While all the studies in the research project will not be completed until 1974, there are already some interesting and significant results which give insights into the rationale, scope, and effects of integrated consumer advertising.

Client and Agency Attitudes Toward Integrated Advertising

The initial focus of the research was to investigate integrated consumer advertising from the viewpoint of the advertising manager. Over a twelve-month period, such advertising in two prominent mass circulation periodicals was studied. Respondents were then selected for personal interviews from among advertisers in these periodicals and from their agencies. Twenty in-depth telephone interviews were conducted with ten advertiser representatives and ten account executives in various cities across the country. The results indicated that none of the respondents had investigated the reactions of black consumers to advertising depicting within the same ad both black and Caucasian models; nor had they tried to relate such integrated advertising to overall sales or sales within racial segments. All respondents discounted the idea that pressure from competitors was the motivation for their integrated consumer campaigns. Rather, it was generally argued that integrated consumer advertising was consistent with the social climate; and this observation constituted the major rationale. For example, many stated that integrated advertising "seems to be the thing to do in these times." Others noted that it resulted "from the national consequences of social change." Thus, it was evident that advertising practitioners had left this area of inquiry relatively unresearched, particularly with regard to the influence of audience-bound factors in affecting response to such advertising.

Chicano Attitudes Toward Advertising

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Because Dr. Meloan and his research colleagues are located in an area with a large population of Mexican Americans, the next phase of the research concentrated on perceptions of advertising among economically disadvantaged Chicano housewives in the $4,000 to $6,000 family income range. One hundred personal interviews were conducted, and they were supplemented by four in-depth focused group discussions with housewives drawn from the same population. The research was designed to elicit the same attitudinal content investigated in an earlier study published in 1968, by the Harvard University Press, entitled Advertising in America: A Consumer View. From this study, coordinated by Dr. Donald L. Kanter, Caucasian perceptions and viewpoints about advertising were abstracted and compared with the Mexican-American viewpoints. The results indicate that more Mexican-Americans believed in the importance of advertising than did the Anglos interviewed in the 1968 study. Although the Caucasians had strong doubts about advertising, a distrust of advertising was even stronger among the Chicano respondents. A majority in both groups indicated that they believe advertising raises the standard of living and contributes to product improvement; but only a minority of respondents in both communities believed that advertising lowers prices.

The focused responses concerning the role of Mexican-Americans in commercials and print media. The Mexican-American housewives responded favorably to the inclusion of their racial group in advertising, especially when Blacks are gaining increasing prominence in advertising content. Respondents indicated that inclusion of Mexican-Americans was a sign of enhanced social structure, and progress in achieving general recognition as a group. The Chicano housewives suggested that advertising would be more effective if Mexican-Americans were portrayed as purposeful and hard-working in the context of an everyday life situation. The avoidance of racial caricatures and stereotypes was also stressed.

Relationship of Economic Well-Being To Racial Prejudice

The third phase of research was based upon the idea developed by Raymond Bauer and others that market segmentation by race may ignore significant motivational differences within a racial group. For example, Bauer divided the urban black population into "strivers," who seek to achieve white middle-class values; and "non-strivers," who do not seek to conform to this value system. Bauer suggested that attitudes toward advertising and toward shopping behavior would differ among these two groups. Accordingly, Dr. Meloan and his associates investigated the hypothesis that individuals within both black and white segments who have a sense of economic well-being and favorable future expectations will be less prone to racial prejudice and more favorable toward integrated consumer advertising designed to reduce that prejudice.

Interviews were conducted among 234 male working-class respondents--133 black, and 101 white. Information was obtained about their future expectations by monitoring responses to statements concerning expected future home ownership, education of their children, job or career advancement, foreign travel, and retirement. In addition, respondents were asked to react to three statements concerning the role of advertising in reducing racial prejudice.

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The basic hypothesis was confirmed: those who were more optimistic about the future were more favorably inclined toward advertising designed to reduce prejudice than were the more pessimistic respondents. These findings suggest that "brotherhood" type advertising may have a salutory effect in actually reducing prejudice. Its perceived effect, however, is greatest among those who also express optimism concerning their economic prospects.

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BIBLIOGRAPHY

ARTICLES

Gould, John W., Norman B. Sigband and Cyril E. Zoerner, Jr., "Black Consumer Reactions to Integrated Advertising: An Exploratory Study," Journal of Marketing, 34(July 1970), pp. 20-26.

Kanter, Donald L., "Advertising and the Mexican-American Consumer," paper presented at A.A.A.A. Southwest Council Annual Meeting, March 1970, reprinted in Advertising Age, March 16, 1970.

Kanter, Donald L., "Advertising to Black and Mexican-American Consumers," University of Southern California Marketing Report, 1973.

Kanter, Donald L. and Gregory V. Wood, "Economic Expectations and Communication's Receptivity," paper presented at AAPOR National Conference, Atlantic City, May 1972; abstract in Public Opinion Quarterly, 36(Fall 1972), pp. 409.

Meloan, Taylor W., "Afro-American Advertising Policy and Strategy," in Bernard A. Morin (ed.), Marketing in a Changing World: Proceedings of the American Marketing Association, June 1969.

DISSERTATION (University of Southern California)

Ingram, Roger T., "Advertising Regulation: The Case of the Mexican Americans."

University: STANFORD UNIVERSITY

Area of Research: A QUANTITATIVE-BEHAVIORAL ATTACK ON THE PROBLEM OF REPETITION IN ADVERTISING

Grantees: Dr. WILLIAM F. MASSY, Professor of Business Administration and Director of Research
Dr. MICHAEL L. RAY, Assistant Professor of Marketing
Graduate School of Business
Stanford University

Purpose of Research

The purpose of the research funded by this grant was to develop a practical laboratory method for testing the effects of repetition in advertising across a wide range of responses. Specific types of responses that were investigated were attention, learning, attitude, behavioral intention, and overt behavior. Thus, one might consider the project to deal directly with the message-bound factor of repetition, as it affects various types of responses to advertising communications.

However, the communications process can be understood only if one takes into account the combined effects of the source, channels, message, and audience factors; as well as the possible interactions among them. Thus, the question facing Dr. Massy and Dr. Ray was not one of a simple relationship between number of message exposures and nature of response. On the contrary, a laboratory method for predicting the short- or long-term effects of repetition must take into account the effects of the other factors that make up the whole communications situation. The researchers recognized this problem at the outset of the project. Accordingly, they proposed to study repetition effects for the wide range of responses in the context of different buyer segments, product types, brands, ad formats or illustrations, colors, schedules, appeals, competitive activities, and media mixes.

Validity of Laboratory Technique

It is obvious from the above discussion that testing the effects of repetition and wearout in a natural, real world setting would be quite expensive, due to the many factors impinging on the situation. A practical laboratory technique that would make sense out of repetition effects in any particular situation would be of great value to advertising planners. The results in the laboratory would be useful, however, only if they were transferable to an actual situation. Eight separate studies funded by this grant were compared with the results of a large field experiment. These comparisons indicated that the laboratory technique produces results comparable to the results of the field experiment. Thus, before managers spend any money on advertising campaigns, they can use such laboratory techniques to predict repetition effects in their decision situation.

Results Challenge Old Media Models

Specific experimental results challenge some of the assumed relationships in computer media scheduling models. When these assumptions were changed, positive effects on computer runs of the model were observed. Thus, every time a company uses one of the improved media models, it is taking advantage of the laboratory studies funded by this grant.

Let us consider some of the specific assumptions that have been challenged. Traditionally, it has been assumed that when advertising response is plotted against the number of repetitions, the graph that results is shaped like a psychological learning curve -- rising rapidly at first and then levelling off. The laboratory results suggest that this traditional "learning curve" interpretation of repetition effects is not accurate in many situations. For example, too much repetition or exposure has been shown to produce a response curve that actually turns down. This is analogous to a situation in which advertising weight is too heavy, producing negative responses among consumers due to boredom or irritation.

Another finding is that often the overall response curve is S-shaped, rising slowly at first, then exhibiting a sharp increase in slope before levelling off. This result suggests that a threshold number of exposures must be reached before a discernible response effect is observed. It has been found that shapes of repetition curves also depend on the type of response being monitored. Thus, the goals of an advertising campaign should constitute criteria for media scheduling decisions; since the effectiveness of different schedules depends upon the type of desired advertising response.

The responses have been monitored in numerous ways. Attention, for example, has been measured using physiological equipment. Learning responses have been measured using recognition and recall tests; and a number of attitude scales have been employed to measure attitudinal responses. Simulated buying situations constituted a measure of overt behavior response.

Applications

As suggested above, the results have been applied in many ways. Four A.A.A.A. agencies have expressed interest in the research findings, and one is actively using the laboratory model. Numerous companies--including Hewlett-Packard, Procter & Gamble, and Standard Oil of California--have also exhibited interest in the research technique and findings. The project has resulted in a dozen papers or articles, eight of which have or will be published. Seven papers have been presented at professional conferences of the AMA, the Institute for Management Sciences, the American Bankers Association, and associations. Of particular current interest is the application of these findings and laboratory techniques to the areas of social marketing and government policy.

BIBLIOGRAPHY

BEST COPY AVAILABLE

ARTICLES, PAPERS, REVIEWS

Boyd, H. W., Jr. and M. L. Ray, "Copy Research Methods in European and U.S. Agencies," Journal of Marketing Research, 8(May 1971), pp. 219-223.

Boyd, H. W., Jr., M. L. Ray and E. C. Strong, "An Attitudinal Framework for Advertising Strategy," Journal of Marketing, 36(April 1972), pp.27-33.

Brown, T. R., M. L. Ray et al., "Interdisciplinary Study of the Mass Media" (NSF-GZ-1488), Stanford University, 1971 (mimeo).

Ray, M. L., "A Behavioral-Laboratory-Model-Field Study of Alternate Message Strategies in Competitive Advertising Situations," AMA Design Competition, 1972.

Ray, M. L., "A Decision Sequence Analysis of Developments in Marketing Communication," Journal of Marketing, 37(January 1973), pp. 29-38.

Ray, M. L., "A Proposal for Validating Measures and Models for Highly Competitive Decision Situations" in Becker, B. W. and H. Becker (eds.), Combined Proceedings...Dynamic Marketing in a Changing World, Chicago, American Marketing Association, 1973, pp. 475-478.

Ray, M. L., "Can Order Effect in Copy Tests Be Used as an Indicator of Long-Term Advertising Effects?" Journal of Advertising Research, 9(March 1969), pp. 45-46.

Ray, M. L., "Initial Processing: Definition, Issues and Applications," Introduction to Part II of Proceedings of the ACR/AMA Workshop (forthcoming).

Ray, M. L., "Marketing Communication and the Hierarchy of Effects," in Kline, F. G. and P. Clarke (eds.), Sage Annual Reviews of Communications Research, vol. 2, Beverly Hills, Sage Publishing (forthcoming).

Ray, M. L., "Predicting Repetitive Effects of Advertising on the Basis of Laboratory Results," paper presented at the Institue for Management Sciences 10th American Meeting, October, 1969 (mimeo).

Ray, M. L., "Review of Marketing Communication: Modern Promotional Strategy by F. Webster," Journal of Business, 46(January 1973), pp. 115-117.

Ray, M. L., "Psychological Interpretations and Theories of Learning," in Ward, S. and T. Robertson (eds.), Consumer Behavior: A Theoretical Sourcebook, New York, Prentice-Hall, 1973.

Ray, M. L., "The Present and Potential Linkages Between the Micro-theoretical Notions of Behavioral Science and the Problems of Advertising," in Davis, H. and A. Silk (eds.), The Behavioral and Management Sciences in Marketing, New York, Ronald Press (forthcoming).

Bibliography (Cont'd)

Articles, Papers, Reviews (Cont'd)

BEST COPY AVAILABLE

Ray, M. L., "The Prospects for Management-Behavioral Science Interaction in Media Modeling," paper presented to the seminar, Evaluating Current Developments in Advertising, University of Illinois, 1971 (forthcoming).

Ray, M. L. and R. Clark, *FOCUS* (S-M-133), Stanford Graduate School of Business, 1970.

Ray, M. L. and R. M. Heeler, "A Proposal for Field Experimental Validation of Repetition Estimates for Media Models," *AMA Proceedings*, December, 1971, pp. 235-238.

Ray, M. L. and A. G. Sawyer, "Behavioral Research for Marketing Models: Estimating the Effects of Advertising Repetition for Media Planning," *Management Science*, 18(December 1971), pp. 73-89.

Ray, M. L. and A. G. Sawyer, "Repetition in Media Models: A Laboratory Technique," *Journal of Marketing Research*, 8(February 1971), pp. 20-30.

Ray, M. L., A. G. Sawyer and E. C. Strong, "Frequency Effects Revisited," *Journal of Advertising Research*, 11(February 1971), pp. 14-20.

Ray, M. L. and W. L. Wilkie, "Fear: The Potential of an Appeal Neglected by Marketing," Journal of Marketing, 34(January 1970), pp. 54-62.

Rothschild, M. L. and M. L. Ray, "Involvement and Political Advertising Effectiveness: A Laboratory Repetition Experiment," paper presented at the 1973 Conference of the American Association for Public Opinion Research, Asheville, North Carolina; abstract in *Public Opinion Quarterly*.

Sawyer, A. G., "An Application of Communication Theory to Advertising," in *First Annual Proceedings of the Northeast Regional Conference of the American Institute of Decision Sciences* (forthcoming).

Sawyer, A. G., "The Effects of Repetition: Conclusions and Suggestions About Experimental Laboratory Research," paper presented to the ACR/AMA Workshop on Consumer Information Processing, Chicago, 1972 (forthcoming).

Sawyer, A. G., "The Effects of Repetition of Refutational and Supportive Advertising," *Journal of Marketing Research*, 10(February 1973), pp. 22-33.

Bibliography (Cont'd)

DISSERTATIONS AND THESES (Stanford University)

BEST COPY AVAILABLE

Heeler, R. M., "The Effects of Mixed Media, Multiple Copy, Repetition and Competition in Advertising: A Laboratory Investigation."

Reed, J. B., "Physiological Response and Other Correlates of Communication Recall" (Master's thesis).

Reed, J. B., "Planned Social Advertising: Testing for Effects of Appeals, Distraction, Involvement, and Competition."

Rothschild, M. L., "The Effects of Political Advertising on the Low-Involvement Electorate" (to be completed 1974).

Sawyer, A. G., "A Laboratory Experimental Investigation of the Effects of Repetition of Advertising."

Strong, E. C., "The Effects of Repetition in Advertising: A Field Experiment."

University: SYRACUSE UNIVERSITY

Area of Research: AN EXPLORATORY STUDY INTO THE KEY VARIABLES SURROUNDING THE CONSUMER'S DECISION-MAKING SET

Grantee: Dr. DAVID L. WILEMON, Assistant Professor of Marketing
Marketing Management and Transportation Department
Syracuse University

In recent years, marketing researchers and theorists have sought new market segmentation criteria that are more meaningful, and more easily utilized in marketing programs, than the traditional socioeconomic variables, such as income and social class. For the advertiser, any proposed basis for identifying or segmenting a market must be judged in terms of its usefulness in media and message selection. Can the individuals in the defined market be reached efficiently by specific media? Do the criteria of audience definition provide a basis for selecting appeals or designing persuasive messages?

Influence of Life Style on Purchase Decisions

Of particular current interest are activities, interests, opinions, values, goals, and situational forces which, taken together, describe an individual's "life style." Dr. Wilemon and his associates studied two different life-style groups--urban and rural--in order to determine the nature of consumer information-handling behavior within each. Any significant differences would suggest that "life style" variables do indeed constitute meaningful bases for identifying and segmenting potential audiences for advertising messages.

The research circumvented many of the problems encountered in other studies of information handling, since the consumers who were interviewed had all purchased for the first time a durable good new to the market. Ninety urban families and sixty rural families, who had recently purchased a snowmobile, met the subject-selection criteria and served as the subject sample. They were asked questions concerning their information sources, product exposure prior to purchase, amount of deliberation, number of brands considered, degree of family participation, plans for use of the product, decision criteria used in selecting the product, and plans for future purchase of the product.

Results of Research

The results of the study confirm the importance of life style as a basis for classifying consumers into market segments. Significant differences in information handling were discovered between the two life-style groups, and these differences would not have been evident if only socioeconomic variables had been employed as a basis for classification.

The specific findings indicate that, for this product, the rural group generally had greater exposure to the mass media than did the urban group. A larger percentage of the rural group used newspaper, magazine, and television advertising than did the urban group; but more of the urban group used buying guides as a source of information. The frequency of information source exposure appeared to be far less important as a means of distinguishing the two groups than did the type of information source employed. This suggests that the two life-style groups rely on different information sources as a means of reducing perceived risk associated with the purchase, but they do not necessarily differ in the amount of risk perceived. It is interesting to note, however, that the rural group exhibited a greater amount of deliberation, as well as a greater degree of family participation, in the purchase decision than did the urban group. These differences may indicate a greater perceived risk among members of the rural group.

Applications

Because significant differences between the life-style groups were found, and because these differences are relevant to the use of information sources, it is clear that the overall research approach can be of substantial benefit to the advertiser in his planning decisions for the promotion mix. From the specific research findings, the advertising practitioner can also gain fresh insights into the importance of life styles as determiners of consumer behavior. Thus, the research study stemming from this grant can serve as a prototype from which similar research can be patterned. It can also serve as a preliminary investigation upon which a body of further theory and research can be based.

The dissertation that results from this grant received an award in the doctoral dissertation competition of the American Marketing Association.

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BIBLIOGRAPHY

ARTICLE

Hasenjaeger, John T., "A Comparative Analysis of Selected Decision-Making Processes for Two Life-Style Groups," unpublished doctoral dissertation, Syracuse University, 1971.

University: UNIVERSITY OF WISCONSIN

Area of Research: APPLICABILITY OF COMMUNICATION MODELS TO PERCEPTION OF ADVERTISEMENTS

Grantee: Dr. IVAN L. PRESTON, Associate Professor
School of Journalism & Mass Communication
University of Wisconsin

Premises of Research

Because many of the research findings in the general communications literature deal with types of communication other than advertising (e.g., letters, memos, news articles), an advertiser who applies such research must assume that the results can be generalized to an advertising context. That is, he must assume that advertising as a form of communication operates in the same way as other, more general, forms of communication. There is some evidence, however, that this assumption is not always a valid one, that advertising may possess unique properties which preclude the effective transfer of general communication models and research to specific advertising situations.

Professor Ivan L. Preston and his student, Steven E. Scharbach, considered this issue of transferability of general communications research to an advertising context; and they hypothesized that advertising differs from other forms of communication in important ways. Their 4A's research was designed to test experimentally this hypothesis and to explore the nature of these differences, if any. The ultimate purpose of the research program was to confirm or disconfirm the generalizability of research findings pertaining to more general types of communication, and to develop an advertising-specific communications model, if necessary.

The variables which Preston and Scharbach investigated had previously been introduced into general communications theory and research, but had not been applied specifically to advertising. Because it was hypothesized that people tend to adopt conventions in responding to advertising that they do not adopt in responding to speeches, news stories, articles, letters, and face-to-face conversations, this would imply that general models of the communication process as well as research studies based on these models may, at least in part, not be applicable to advertising.

Methodology

An experiment was performed which presented subjects with messages in the form of ads, news stories, memos, and letters. All 105 subjects received the same 12 messages, but their form was systematically varied so that messages of identical content were presented to some subjects as ads, and to others as news stories, memos, or letters. The experimenters monitored responses to the messages, and compared the responses to messages with identical content, but different forms. Thus, it was possible to measure the influence of message form on perception of message content.

After each message was presented to the student subjects, they were asked to respond to five statements. Two of these statements were defined by the experimenters as "accurate" and three were "inaccurate." One of the accurate statements about the message was a simple paraphrase of message content, and the other accurate statement was a logically-valid derivation of the message content. The three inaccurate statements included a logically-invalid derivation, a statement actually negated by the message content, and an "independent" statement unrelated to the message content.

Results of Research

The findings indicate that individuals tend to accept logically invalid statements to a greater extent when message content is presented in the form of an advertisement. This suggests that people look at advertisements in a different way than they look at other forms of communication. Because the illogical statements were favorable to the advertiser, one may conclude that there is a tendency with ads more than with other forms of communications for individuals to attribute to the communicator what they think he wanted to say, or meant to say, even though such attribution is illogically derived from message content. This unique "tolerance" for advertising was evident in post-experimental interviews with subjects, who indicated that they perceived advertising as purposeful communication, designed to create a favorable impression of the product. Thus, favorable but illogical statements about the product were perceived as "accurate" statements in the sense that while they could not be logically derived from message content, they could indeed be viewed as accurate representations of the advertiser's intent. Because individuals believed they knew what the advertiser wanted to say, they tended to interpret the advertisement as if such statements actually were made.

Conclusions

The results of this and other studies performed by Preston suggest that advertising as a form of communication is perceived in a distinctive manner, characterized by the acceptance of favorable, but logically invalid, inferences from advertising content. This implies that while individuals may express intolerance for advertising, they may unconsciously counteract that intolerance by supposing the advertiser to make favorable statements that he actually does not make. Preston suggests that at this stage of experimentation, this intriguing idea should be accepted only as an hypothesis.

We must conclude, however, that the research funded by this grant supplies ample evidence that advertising is, in many ways, an unique communication form. As such, the advertiser should be cautious in his attempts to apply the findings of general communications research. Additional research in this area is still in preparation.

BIBLIOGRAPHY

ARTICLES

Preston, Ivan L., "Logic and Illogic in the Advertising Process," Journalism Quarterly, 44(Summer 1967), pp. 231-239.

Preston, Ivan L. and Steven E. Scharbach, "Advertising: More Than Meets the Eye?" Journal of Advertising Research 11(June 1971), pp. 19-24.

DISSERTATION

Scharbach, Steven E., "Consumer Information Processing for Brand Decisions," University of Wisconsin (forthcoming).

PART III

CONCLUSIONS

PART III

CONCLUSIONS

In 1966, Dr. Vernon Fryburger, Professor of Advertising and Marketing at Northwestern University, noted that advertising practitioners are pragmatists who seek immediate answers to immediate questions. Thus, he said, "... we cannot and should not look to the practitioners to structure the field or contribute substantially to its content."[1] Yet, advertising knowledge must be advanced in order to assure the future prospetity of the industry. Observing that much of the industry's growth can be attributed to a growing economy and an innovating communications technology, Dr. Fryburger suggested that our confidence in the "conventional wisdom" should be tempered with an awareness of our rather limited knowledge of the advertising process. If we continue to depend on advertising's "conventional wisdom," we may find ourselves solving tomorrow's problems with yesterday's mistakes. Dr. Fryburger concluded that if this situation is to be avoided, then the academic community must contribute to the advancement of our knowledge of the advertising process. As of 1966, however, the role of the academic community in advancing advertising knowledge had not been fully recognized by the advertising industry. Fryburger stated:

> In contrast with other professions, the advertising community has not made any significant commitment to the formal pursuit of advertising knowledge. It has not provided the moral support nor the financial support to mount any continuing research program in the university community.[2]

The A.A.A.A. Educational Foundation grant program for academic research in advertising corrected this situation by providing the support that Fryburger perceived to be so necessary and, yet, so lacking. Since 1968, grants have been awarded to 22 universities for research in advertising. Administered by the nation's most distinguished academic researchers in the marketing and advertising disciplines, the grants resulted in a quality of research that is uniformly excellent. The variety of research topics, taken together, deal with every stage of the communications process, ranging from an analysis of the role of the communicator in successful message generation to investigations of the dynamic relationships between various types of advertising response. Some studies deal with individual response, others with aggregate response; some with short-term advertising effects, others with long-term social and economic effects. In addition, a number of grants contribute significantly to our knowledge of research tools and methodologies, applicable to a wide range of marketing and advertising problems.

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[1] Vernon Fryburger, "Building the Discipline of Advertising," Occasional Papers in Advertising, 1 (May 1966), p. 5.

[2] Ibid, p. 6.

In many ways the grant program is having a lasting and mutually beneficial effect on the advertising industry and the academic community. Knowledge of the advertising process was significantly advanced by the efforts of the grantees, and this is evident by a perusal of the reviews and references in Chapter II. The graduate students who benefited directly from this acquisition of knowledge are now pursuing research and teaching careers in advertising. Armed with more than advertising's "conventional wisdom," they are positively influencing the next generation of advertising practitioners. A more immediate, but continuing, benefit of the grant program is the fact that some grants provided "seed money" which attracted other sources of academic support. By thus fostering the expansion of comprehensive research programs in advertising, the A.A.A.A. Educational Foundation has contributed substantially to the acceptance of advertising as an academic discipline.

In order to appreciate the direct value of the grant program, one must understand the potential benefits as well as the inherent limitations of a relationship between the academic and applied areas of a discipline. The National Academy of Sciences recognized the potential benefits in a report to the Committee on Science and Astronautics of the U.S. House of Representatives. Among the conclusions and recommendations to the committee were the following:

> The transfer of technology from the laboratory to a producing or operating organization which builds, sells, or uses it, is a vital and often underestimated step in technological innovation.
>
> Applied research organizations should interact with universities wherever possible.
>
> The university plays a crucial role in the education of people for applied research.[3]

Yet, one must also recognize the limitations to mutual gain that are attributable to differences in methods and goals within the academic and applied areas of a discipline. In a discussion of the marketing discipline, Raymond A. Bauer, Professor of Business Administration, Harvard University, noted some of these limitations:

> The most direct problem posed by the use of marketing research information is that such information is seldom neutral. It favors one course of action over another, proves one man right and another wrong. This dampens the enthusiasm of some persons for any information whatsoever, and sharpens the ingenuity of others in interpreting data to their advantage. A further difficulty is that the procedures for the routine conduct of business often are not always sufficiently orderly

---

[3] The National Academy of Sciences, Applied Science and Technological Progress, Washington, D.C. (U.S. Government Printing Office, 1967), pp. 14, 16, 17.

> that research can be commissioned in time to be useful. Methods of rewarding personnel may make it advantageous to act contrary to the findings of research. And so on. Difficulties can be minimized, but only if the firm has a far better than average decisions-process structure and more than average discipline in adhering to decisions. Business consultants can testify that difficulties of this sort are routine, and very resistant to correction.[4]

In addition to the organizational aspects of research implementation which may limit the usefulness of that research, we must also keep in mind other possible differences in the methods and goals of the academic researcher and the advertising practitioner. These were suggested by Professor Fryburger when he discussed the practitioner's search for immediate answers to immediate questions. On the basis of this observation, Fryburger concluded that the academic community was the proper place to advance advertising knowledge. Inherent in this conclusion is a realization that the academic researcher and the advertising practitioner may have different research goals, characterized by different levels of interest in the discovery of scientific knowledge as opposed to day-to-day fact gathering, and different levels of interest in understanding the advertising process as opposed to predicting advertising effects. Ultimately, of course, the interests of the practitioner and the academician merge when better understanding results in improved prediction. Nevertheless, differences in research goals must be considered when academic research is interpreted by the advertising practitioner in terms of some criterion of usefulness.

Another factor that must be considered when evaluating the usefulness of academic research for an applied discipline relates to the generalizability of specific research findings. In an article with the intriguing title, "Is Communications Research Really Worthwhile?" advertising executive Allan Greenberg observed that the journals of marketing, communications, psychology, and other behavioral sciences contain accounts of many research studies employing ingenious experimental designs and methods of data analysis. Yet in most cases, the results are tentative or are presented as evidence for or against a certain theoretical position. To the extent that they improve his understanding, such results should be of great interest to the academic researcher; but they can be frustrating to the advertising practitioner who is seeking solutions to problems associated with a particular campaign for a specific brand at a given time. That is, while the researcher is seeking general principles and direct empirical knowledge, the practitioner must deal with the specific content of his strategy:

> The problem is somewhat similar to that of statistical and clinical prediction, substituting for a person the specific case as one out of a universe of such cases. Statistically, the principle may hold over a large enough number of cases, even under unknown or unspecified sets of circumstances; but the problems faced by marketing executives practically always call for clinical prediction.[5]

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[4] Raymond A. Bauer, "Application of Behavioral Science," Ibid, p. 98.

[5] Allan Greenberg, "Is Communications Research Really Worthwhile?" Journal of Marketing, 31(January 1967), p. 49.

Thus, any direct application of marketing research findings must always be made with caution, particularly if the research is not specifically tailored to a particular decision context. When judged on criteria other than direct applicability, the value of such research lies primarily in advancing scientific knowledge by improving our understanding of complex processes. With such an improved understanding, the practitioner can pursue his specific goals with a more sophisticated appreciation of the marketing tools at his disposal. A better understanding of the advertising process should also enhance his ability to ask the right questions.

By providing him a theoretical structure on which to base his knowledge, academic research exposes gaps in existing knowledge, thus clarifying not only what we know about the advertising process but also revealing areas most in need of study. Advancement of scientific knowledge of the advertising process should also aid the advertising practitioner in formulating alternative strategies, by making him aware of previously unrecognized opportunities. Such functions of academic research do not constitute direct applications of research findings; but they do broaden the perspective of the practitioner, expanding his imagination and opening his mind to new strategy alternatives.

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